

# Chicago Forward

## Department of Transportation **Action Agenda**







## OFFICE OF THE MAYOR CITY OF CHICAGO

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[www.cityofchicago.org](http://www.cityofchicago.org) • @chicagomayor

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### Dear Fellow Chicagoans,

Chicago is the city that many look to for the future — the future of the Midwest, the future of industry, and the future of the environment. Our accomplishments and progress are important not only to our residents, but to the strength of the region and the competitiveness of our nation as a whole.

We have always been a city built around transportation — first water, then rail, then roads. This will continue to be true as our transportation system continues to evolve. Where we once built expressways that divided our communities, we are now reconnecting neighborhoods with new bus lanes and extensive and expanding bicycle facilities that offer safe, green, and fit ways to travel for all ages. The substantial investments that we make in our freight rail network will ensure sustainable and reliable transport not only for the region, but the national economy as well.

I've told my team that we need to improve our government's efficiency, our communities' vitality, our children's environment and safety, and our growth as a center for commerce.

"Chicago Forward" is a roadmap toward achieving this vision through concrete, measurable steps in the realm of transportation: better construction, great public spaces, safer streets, and support for neighborhood and global businesses. I applaud the work of our Department of Transportation in putting forth this document as a concise digest for every Chicagoan to follow as we advance towards our future.



**Rahm Emanuel**  
Mayor





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# DEPARTMENT OF TRANSPORTATION CITY OF CHICAGO

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## Dear Friends,

Chicago's transportation network is the envy of the nation in many ways: we are the preeminent hub of the world's most extensive freight rail system; home to two of the nation's busiest airports; have a well-established and well-used bicycle network; support one of the nation's busiest transit systems; and many Chicago sidewalks bustle with activity day and night.

However, we face substantial challenges too: Chicago is first in the nation for regional traffic congestion; bottlenecks disrupt and delay our freight and passenger rail services; roadway crashes cost time, money, and lives; and rates of childhood obesity are well above national averages, endangering health over a lifetime.

But we are up to overcoming all of these challenges. I am honored to lead a team of the nation's best transportation professionals at CDOT. We aspire to plan, build, and maintain a transportation system that improves the quality of life for everyone in Chicago — one that is balanced to serve the needs, safety, and health of all users, regardless of how or where they are traveling, and regardless of their age or ability.

"Chicago Forward" outlines the critical values and principles we aspire to as protectors of the city's transportation network and the policies and actions that will help us continually make progress toward those ideals. It documents the specific, measurable targets that I have established for the Department and the outcomes we expect to accomplish within the next two years.

I look forward to working with the citizens and leadership of the city in achieving the goals of Chicago Forward. Doing so will make Chicago an even stronger economic engine and environmental leader for the next generation.



**Gabe Klein**

Commissioner, Department of Transportation









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This agenda has six principles, one for each point on the Chicago flag's stars. Use the colors and the star in each upper left corner to find the pages about each principle.





# CHICAGO TIMELINE

1673

Explorers Marquette and Joliet learn about a shortcut back to Lake Michigan: a grassy portage to the Chicago River.

1785

The Federal Land Ordinance of 1785 establishes a square-mile grid system for land in the new Midwest. Chicago's major streets later develop on the lines of this grid.

1795

The U.S. acquires land at the mouth of the Chicago River to control access to the Great Lakes, building Fort Dearborn eight years later.

1837

City of Chicago Incorporated on March 4.

1848

The Illinois and Michigan Canal opens; connecting the Great Lakes and the Mississippi River makes Chicago a hub for shipping and commerce. Also, the first locomotive of the Galena and Chicago Union Railroad reaches Chicago.

1902

The "20th Century Limited" train begins 65 years of express passenger service to New York. Its boarding process inspired the phrase "getting the red carpet treatment" and its iconic Art Deco locomotive from the 1930s was honored on a 1999 postage stamp.

1908

A City Council ordinance eliminates duplicate street names from annexations and rennumbers buildings into the 800-to-a-mile system used today. It also establishes State and Madison as center point for directional designations, lettered Avenues on the southeast side and the alphabetically-grouped names for North-South streets

1910

July 27 an ordinance requires the Chicago, Milwaukee, and St. Paul Railway to elevate its Bloomingdale Avenue Tracks to eliminate collisions with pedestrians and livestock. A century later, efforts were underway to turn the embankment into the Bloomingdale Trail.

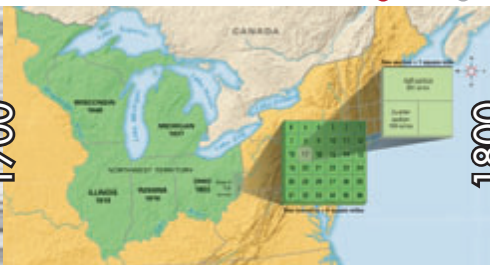
1920

The Michigan Avenue Bridge (now the DuSable Bridge) opens to traffic; its sidewalk markers outline the site of Fort Dearborn.

1600



1700



1800



1900



1920



1853-1860

Attorney and former congressman Abraham Lincoln regularly visits the Chicago headquarters of one of his best clients, the fast-growing Illinois Central Railroad.

1869

City council authorizes the construction of 26 miles of Boulevards.

1892

The first elevated train line begins operations – still used by the Green line.

1895

Mechanical engineer Ignaz Schwinn starts a bicycle manufacturing company, one of dozens on the West side.

1897

The Union Elevated railroad - today known simply as the Loop, connects four elevated rail lines.

1918

The Hotel LaSalle Parking Garage at 215 W. Washington opens as the first multi-story parking garage built in the US (and perhaps the world) and stands until 2005.



○ 1932

Municipal (now Midway) Airport – in its 10<sup>th</sup> year of operations becomes the world's busiest, carrying over 100,000 passengers.

○ 1942

"Dodge City" aircraft engine plant opens, making engines for the US military B-29 planes during WWII. After the war, the plant was leased to auto manufacturers (Tucker and Ford Motors). Today, Ford City Shopping Center and Tootsie Roll Industries occupy the site.

○ 1943

State Street Subway opens. Work continued in wartime, despite rationing, due to its ability to cheaply move workers and to serve as a bomb shelter.

○ 1969

New CTA service begins on facilities built by the City in medians of the Kennedy and Dan Ryan Expressways, creating the southern section of the modern-day Red Line and extending the modern-day Blue Line to Jefferson Park, with onward express bus service to O'Hare.

○ 1984

Rapid transit service extended to O'Hare airport. Also, Honorary Street Name Ordinance passes, allowing honorees to have a street named for them without changing the official street addresses.

○ 1992

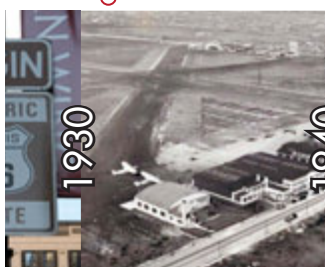
Chicago Department of Transportation (CDOT) created during a reorganization of the Department of Public Works.

○ 1993

Orange Line opens on Halloween. Also, the city secures federal congestion relief funds for public bike racks across the City, now the largest such program in the US.

○ 2012 - 2014

Continue reading to Chicago's future actions!



1930



1940



1950



1960



1970



1980



1990



2000

2012

○ 1927

US Route 66, the most famous highway in US history, is established. It starts at the Jackson/Michigan intersection and runs 2,400+ miles to Santa Monica, California.

○ 1925

Chicago Union Station opens

○ 1947

The Chicago Transit Authority (CTA) is created and acquires rapid transit, streetcar and bus lines from bankrupt corporations.

○ 1958-1965

Growth of the federal Interstate Highway System leads to construction of more expressways: Chicago Skyway (1958), Kennedy (1960), Dan Ryan (1962), and Stevenson (1964, on lands of the former I&M canal).

○ 1955

The first commercial flight departs O'Hare Airport and the first segment of the Eisenhower Expressway opens.

○ 2008

In June, Senator Barack Obama celebrates clinching his party's presidential nomination with a family bike ride to the Lakefront. He insists on wearing a helmet to be a role model for young cyclists.

○ 2011

CDOT begins work on reconstruction of 56 year old N-S Wacker Drive and finishes reconstruction of the 68 year old Grand/State Red Line Station.

# VISION STATEMENT

"Ensure that Chicago continues to be a vibrant international city, successfully competing in the global economy with a transportation system that provides high-quality service to residents, businesses, and visitors – a system that offers a solid foundation for the city, regional and national economies, yet is sensitive to its communities and environment."







“The Chicago Department of Transportation’s mission is to keep the city’s surface transportation networks and public way safe for users, environmentally sustainable, in a state of good repair and attractive, so that its diverse residents, businesses and guests all enjoy a variety of quality transportation options, regardless of ability or destination.”

# MISSION STATEMENT

# REWIND

Transportation has always shaped Chicago and its people.

In 1795, the United States acquired land at the mouth of the Chicago River from Native Americans to serve as a portage to move boats between the Great Lakes and the Mississippi River watershed. From that site grew Fort Dearborn, which by 1837, had transformed into the first incorporated city in Illinois: Chicago.

From the opening of the Illinois & Michigan Canal in 1848, through the rise of rail and air travel, Chicago has been a critical transportation link between the eastern and western United States. Transportation assets and infrastructure have created today's Chicago and will continue to shape us and the nation, in the future.

Chicago's transportation systems move millions of people and billions of dollars of freight annually. Chicagoans make more than 8.8 million trips a day on our roads, rails, bridges and trails. More than 39 million visitors a year walk our sidewalks, and drive and bike on our streets.<sup>1</sup>

Chicago is also the heart of a \$500 billion regional economy, the 4th largest in the world.<sup>2,3</sup> About 4.5 million workers travel to and from jobs in the region every day to support the world's 5th most important business center (just behind London, New York, Tokyo and Singapore).<sup>4,5</sup> Roughly 450,000 tons of freight worth nearly \$700 billion moves into, out of and through the Chicago freight system every year, representing one quarter of the nation's daily freight rail traffic. The nation's economic growth relies on Chicago's economic health and continued vitality. But that economy, in turn, relies on a solid foundation of efficient and reliable transportation.

This transportation backbone is so integral to our regional life and economy that we often only notice when this highly complex network experiences a hiccup. As Mayor Emanuel stated in his transition report, "So effective is our transportation system







that we tend to take it for granted. We assume that the “*City of Broad Shoulders*” can carry any load for as long as needed.”

The responsibility of managing this complicated network can be overwhelming: Chicago is tied for first in the nation in traffic congestion; over a hundred motorists and dozens of pedestrians and cyclists lose their lives on Chicago roads each year; hundreds of miles of roadway are in poor or very poor condition due to deferred maintenance caused by budgetary constraints; 40% of Chicago Transit Authority (CTA) stations are more than 50 years old and have not had major improvements in their lifetime.

After housing, transportation remains the second highest household cost for most Chicago families, in excess of 17% for many, and the combined expenses for housing and transportation constitute more than half the income for many Chicagoans. This leaves little additional money for other expenses, such as quality child care, higher education, or healthy foods.

While the challenges of the city’s transportation system are great, the opportunities are many. The following pages identify six principles that steer CDOT and over 170 specific and measurable actions the agency will undertake over the next two years. These actions will help to fulfill the vision for a greater Chicago articulated by Mayor Emanuel and advance prosperity for all Chicagoans, the Midwest and the nation as a whole.

In this way, we will help move **Chicago Forward**.



# Safety First







***SAFE ROUTE AMBASSADORS - "WALKING SCHOOL BUS"***



## safety first

Safety is paramount in a complicated transportation system where pedestrians share the right of way with fast moving vehicles, bicycles intermingle with delivery trucks, and roadways cross freight rail lines. Policies and actions to keep everyone safe must take many forms, and be addressed at multiple levels. From planning through implementation to evaluation, from education to enforcement, safety is always a priority for the city.

On average, Chicago experiences roughly 3,000 crashes between motor vehicles and pedestrians resulting in 50 pedestrian deaths each year. This is safer than the 2003 to 2007 period when the city had over 3,500 crashes and more than 60 pedestrian fatalities a year, and a dramatic change from 1994 when 88 pedestrians were killed in that year alone. Chicago has been making steady progress to improve transportation safety for all users, and has had fewer pedestrian fatalities per capita than most of its peer cities.

But every life lost is one too many.

The Chicago Department of Transportation will take action to promote safety at every level of project development and through multiple avenues of outreach. Planning, evaluation, and budget programming provide a firm foundation for ensuring continuous improvement in safety performance, while thoughtful and innovative design of each individual project improves overall system safety. Education and enforcement are also critical components to ensure that users of the system understand their role and responsibility in public safety.





## Performance Measures

1. Eliminate all pedestrian, bicycle, and overall traffic crash fatalities within 10 years.
2. Reduce pedestrian and bicycle crash injuries, each by 50% within 5 years.
3. Reduce total roadway crashes and injuries from all roadway crashes, each by 10% every year.
4. Increase by 5% annually, the total number of adults and children who receive in-person safety education.



[Safety is paramount.]





## POLICIES + ACTIONS

# 1

### **Evaluation: Gather and use data to assess the root causes of transportation safety hazards and address them in a systematic and sustainable way.**

Data collection, evaluation and analysis are critical to understanding where, how and why certain conditions or practices cause safety hazards for users of the transportation system. Although rich sources of transportation data exist, not all of these data sets are currently available to CDOT. Comprehensive network-wide analysis and data review will assist in determining where strategic interventions can be made in one part of the system to improve overall operations and safety in the broader network. One key piece of the puzzle was completed in 2011 as CDOT finalized and published an analysis of all crashes involving pedestrians from 2005 through 2009.

CDOT is called upon to conduct over 400 location-specific traffic studies each year to address issues with vehicular, pedestrian, and/or bicyclist safety. However, many times, the underlying cause of the safety hazard is elsewhere in the system and can only be determined and addressed through a broader area-wide study. CDOT will need to be proactive in identifying needs for such studies. For these, and the site-specific analyses that will continue to be necessary, new funding sources will need to be identified.



*CDOT conducts  
over 400  
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traffic studies  
each year.*



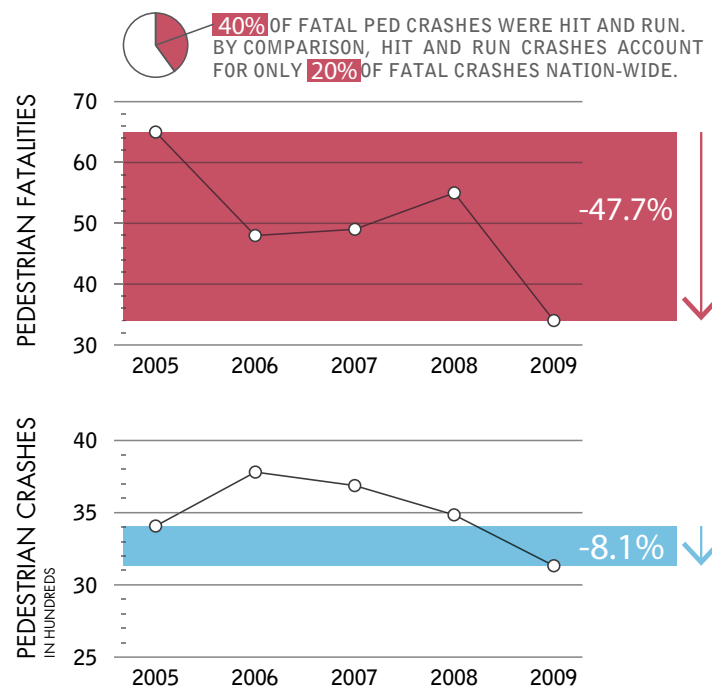
## 1 » ACTIONS

- Annually evaluate the top 10 crash locations in the city and implement quick, low-cost improvements while also seeking funding for more comprehensive changes.
- Analyze all fatal crashes involving pedestrians or bicycles.
- Seek opportunities for comprehensive, larger area neighborhood traffic studies to improve safety, address cut-through traffic, and reduce driving speeds to create livable neighborhoods.
- Establish a sign reflectivity assessment and management system to comply with upcoming federal requirements for regulatory and warning signs.
- Establish an intergovernmental agreement with Argonne National Lab to access its traffic simulation model (TRANSIMS) for local and citywide analysis.
- Complete a bicycle safety study in collaboration with the University of Illinois-Chicago.
- Develop a red light and speed enforcement placement model to ensure that the city's automated enforcement program does everything it can to protect Chicago residents.

### CITY-WIDE TRENDS

The frequency of pedestrian fatalities in Chicago have fallen dramatically in recent years. However, total annual pedestrian crashes have not decreased by nearly as much, and even saw increases over the same period.

#### 1. City-Wide Pedestrian Crash Trends



## PEDESTRIAN CRASH ANALYSIS

As a part of a federally-funded initiative to improve pedestrian safety, CDOT completed a comprehensive analysis of pedestrian crashes within Chicago. This study, which examined pedestrian crashes from 2005-2009, found that the city has experienced a 9% reduction in crashes since 2005, and a 21% reduction since 2001.

In 2009, Chicago had its lowest pedestrian fatality rate in 15 years, which was also the fifth-lowest pedestrian fatality rate among large U.S. cities. The number of pedestrian crashes, on average, is still over 3,000 per year, or more than eight per day.

Over 17,000 crashes involving pedestrian fatalities or injuries were examined in this study. Below are some of the study's findings:

- Hit-and-run crashes were more common in Chicago than other major cities and comprised 33% of all crashes, with an average of two every day. Among fatal crashes, about 40% in Chicago were hit-and-run, compared to 20% nationwide.
- The most typical pedestrian action at the time of the crash was lawfully "crossing with the signal."
- Thursday had the most crashes, while Saturday had the least.
- Crashes most often occurred 3-6 pm, with 6-9 pm next worst. However, almost half of crashes with senior citizens injured were between 9 am and 3 pm.
- Taxis were involved in 28% of crashes with pedestrians in the Central Area.
- Turning vehicles were involved in a large portion of pedestrian crashes: 66% in the Central Area and 52% at signalized intersections citywide.
- Vehicles turning left were two to three times more dangerous than vehicles turning right.
- Four of the top twenty crash locations were located along a two-mile stretch of 79th Street. Most of the others occurred in a band of communities from Austin, east to the Loop and Near North Side.



## 2

### **Engineering: Develop standards and complete designs to ensure the safety of all users, including pedestrians, cyclists, motorists, children, seniors, and people with disabilities.**

We must ensure that our streets are safe and are designed for all users. This is a fundamental element of Chicago's Complete Streets policy (read more on page 42), because unsafe choices of travel are not really choices at all.

The elements of street design such as geometry, visibility, maintenance, signs, landscaping, and technology, can make the difference between what is safe and unsafe at intersections, at driveways, and in travel lanes. Developing standards for these designs will make these improvements better, faster, and less expensive. In all of these efforts, it is particularly important to make sure the most vulnerable Chicagoans are safe.



## **2 » ACTIONS**

- Develop strategies, an action plan, and funding resources to begin transformation of residential streets to a 20 mph standard.
- Adopt formal design and site selection standards for pedestrian facilities such as mid-block crossings, signs, refuge islands and crosswalks for use in Chicago and integrate into Complete Streets guidelines.
- Install countdown pedestrian signals at 300 intersections in 2012 and, if funding is available, 100 more intersections in 2013.
- Install Leading Pedestrian Intervals (LPI) at 100 intersections in 2012 and, if funding is available, 100 more intersections in 2013.
- Develop policies and standards for bicycle signals and leading bicycle intervals, deploy at least 10 pilot locations in conjunction with





protected bike lanes, and collect data for evaluation.

- f. Install 10 pedestrian refuge islands per year at locations recommended by Aldermen through the “menu” capital improvement program.
- g. Expand the use of in-street “State Law: Stop for Pedestrians” signs, speed indicator signs, and related devices through the Aldermanic “menu” capital program.
- h. Adopt a policy on the use of Accessible Pedestrian Signals (APS).



## DAMEN-ELSTON-FULLERTON

The Damen-Elston-Fullerton intersection has often been one of the ten most dangerous intersections in the city, with as many as 100 crashes in a year. Its skewed, six-point, three-signal orientation challenges turning vehicles and often results in poor judgment by drivers. The short distance between signals limits storage space for turning vehicles, the corners are too sharp for turning buses and trucks, and pedestrian and bicycle facilities are inadequate.

After evaluating alternatives that would either simply modernize signals or build an overpass or tunnel for Fullerton traffic, a more creative option was chosen. It will relocate Elston Avenue (the diagonal street) to bypass the current intersection, creating three separate signalized four-point intersections. Access will be maintained to businesses and homes facing the bypassed section of Elston by converting it to a narrower local street.

This design has several benefits:

- **Improved safety:** Significant reduction of potential vehicle conflicts and driver confusion, resulting in fewer opportunities for crashes.
- **Minimal inconvenience during construction:** The majority of the project can be built while the existing intersection continues to operate.
- **Bicycle and Pedestrian Infrastructure:** Improved pedestrian and bicycle facilities, including a new continuous bike lane along Elston.
- **Assist with future growth:** Enhances economic development potential along the corridor with a new face-lift for the area.



2. Rendering of Damen-Elston-Fullerton proposed alignment



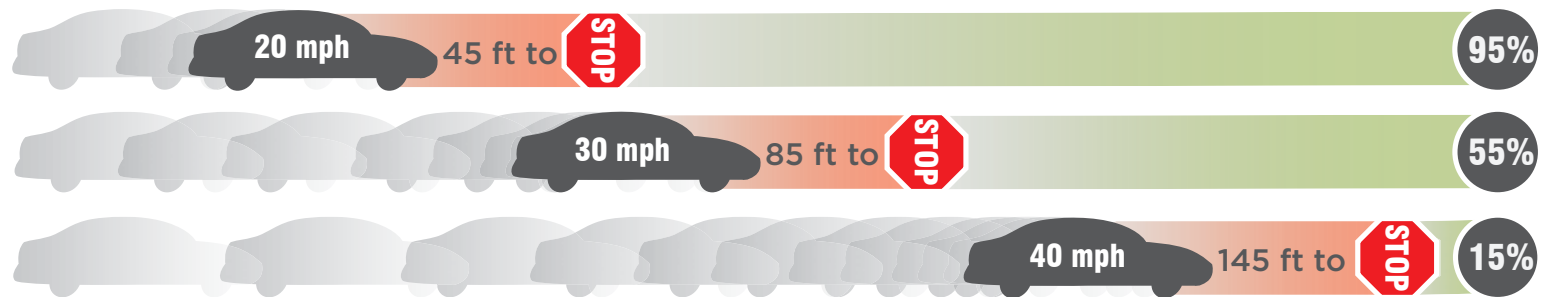
### 3 Enforcement: Partner with sister agencies to refocus enforcement efforts to protect the safety of all users, particularly the most vulnerable.

While it would be nice if everyone complied with safety regulations all of the time, the fact is many of us are often tempted to try to push the limits of safe behavior. Enforcement is a necessary reminder that these laws are a social compact with one another that can keep our entire community safe. For example, our network of red-light cameras has helped reduce angle ("T-Bone") crashes by 29% in the two years after installation compared to the two-year period prior to installation.

And speed matters. The difference between a motorist speeding at 40 mph and a driver observing the typical city speed limit of 30 mph, is not just one of braking time, it can be a matter of life and death. A pedestrian hit by a car at 40 mph has a 15% chance of survival; at 30 mph, the odds of survival increase to 55%. At 20 mph, although injuries may be likely, the survival rate increases to 95%.



Chance a **person** would survive if hit by a car travelling at this speed



3. Vehicle and Pedestrian Collision Speed Survival Percentage



### 3 » ACTIONS

- Continue the use of the red-light automated enforcement program.
- Begin automated speed enforcement in designated Safety Zones around schools and parks.
- Conduct targeted enforcement efforts 100 times a year in different parts of the city, in partnership with the Police Department and Aldermen.
- Work with the Police Department to integrate greater enforcement of pedestrian and bicycle protection regulations into officers' regular duties and activities.
- Encourage the assignment of bicycle and pedestrian safety coordinators and trainers within the Police Department.



4. Red-Light Camera Locations



# 4

## Education: Promote awareness to all residents and travelers on safe habits to decrease transportation risks and increase safe, efficient, and enjoyable travel in the city.

Education may not always be visible to the general public, but it is one of the most effective ways to ensure safety for all. When we learn and remember to travel in ways that are considerate and reduce risk, fewer crashes (and close calls) are the result and our transportation system operates more reliably and efficiently.

Education is truly a community effort. CDOT and our many partner agencies have a remarkable track record of education, including the Bicycle Ambassadors and Junior Ambassadors program and the more recent Safe Routes Ambassadors program. Year after year, seat belt and bike helmet usage increase, pedestrian injuries and fatalities decrease, and students walking or biking to school travel safer. Building on these successes will make Chicago even safer.



*Education is truly a community effort.*

## 4 » ACTIONS

- a. Increase the number of schools, parks and events visited each year by ambassador programs (see table) to expand pedestrian and bicycle safety education for children and adults.
- b. As a result of ambassador programs, increase the number of schools that get a second, message-reinforcing, visit and increase the number of people receiving context-based practice.
- c. Conduct media safety education campaigns targeting drivers, cyclists and pedestrians, including the issue of distracted driving.
- d. Expand specialized outreach trainings on non-motorized traveler safety.
  - » Provide at least five trainings for non-English proficient populations, including at least two in Spanish.
  - » Provide trainings for taxi drivers and city fleet drivers.
  - » Increase the number of trainings for senior citizens.
- e. Use the Chicago Conservation Corps (C3) and other programs to support volunteer-led events and training that promotes bike and pedestrian safety at the grassroots level.
- f. Distribute bike helmets to members of Chicago's new bikesharing system who need them.



## BICYCLING AMBASSADORS + SAFE ROUTES AMBASSADORS

The city of Chicago's Bicycling Ambassadors and Safe Routes Ambassadors encourage Chicagoans of all ages to bike and walk more often and to do so safely. Together, the ambassadors total more than 500 visits each year to events and schools throughout the city.

The **Bike Ambassadors** attend community events and staff key cycling locations from May through September. Large numbers of people see them on the busy Lakefront Trail as they provide maps and cycling information and answer cycling-related questions, but more often they are on assignment to give safety presentations to groups of kids, teens or adults.

During "Share the Road Campaign" events (51 in 2011), ambassadors stop cyclists who run red lights or ride on sidewalks to educate them on safer cycling; at some events they offer donated headlights to cyclists without them. They also educate motorists about sharing the road with cyclists and pedestrians.

For six weeks in the summer, they are joined by the **Junior Ambassadors**. These twelve teenagers, graduates of an After School Matters bike safety and repair class, are sponsored by the Chicago Park District. Together, they teach safe cycling to young campers at 165 Park District Day Camps.

During events, Bike Ambassadors conduct helmet fits (1,186 in 2011) for kids and adults. If not properly fit, helmets can slide out of position during a crash and fail in their crucial role to reduce head and brain injuries, and even fatalities.

The breadth of the Bike Ambassadors' efforts can be measured by the nearly 400 events attended each summer; the five languages in which brochures are available (English, Spanish, Polish, Korean and Chinese); and the 15-60 miles the ambassadors bike on Chicago's streets and trails each day, going from event to event, materials in tow on a bike trailer.

The **Safe Route Ambassadors** have a different focus, but an equally important task. They visit over 100 elementary schools each school year, teaching pedestrian safety to second graders and cycling safety to fifth graders. After classroom presentations on the first visit, they often return to conduct outdoor workshops with students, reinforcing and expanding on the material and skills taught in class.

In addition to providing elementary school programming, the Safe Routes Ambassadors work with high school driver's education classes to teach about sharing the road, driving safely around bicyclists and pedestrians, and making smart transportation choices.

The elementary and high school programming is offered to every school in Chicago, public and private. At some public schools, the Safe Routes Ambassadors also provide comprehensive Safe Routes to School programming to close the gap between safety learned in the classroom and at home, and to help schools address barriers to safe walking and biking in their community.

To invite these energetic safety educators to your summer event or elementary school, or to just learn more, visit [www.bicyclingambassadors.org](http://www.bicyclingambassadors.org) or [www.saferoutesambassadors.org](http://www.saferoutesambassadors.org).

| Bike Ambassadors                       | 2010   | 2011   | 2012<br>(projected) |
|----------------------------------------|--------|--------|---------------------|
| Total Events                           | 368    | 399    | 420                 |
| People Educated                        | 60,050 | 61,180 | 63,000              |
| Target Enforcement                     | 47     | 62     | 75                  |
| People Stopped in<br>Enforcement Event | 9,000  | 13,000 | 16,000              |
| Park District Day Camps                | 147    | 165    | 180                 |
| Youth + Kids Educated                  | 15,000 | 16,000 | 18,000              |

| Safe Routes<br>Ambassadors                   | '09 - '10 | '10 - '11 | '11 - '12<br>(goal) |
|----------------------------------------------|-----------|-----------|---------------------|
| Number of Schools                            | 94        | 104       | 120                 |
| Number of Students                           | 8,329     | 9,921     | 11,600              |
| Schools visited twice                        | 10        | 70        | 85                  |
| Students visited twice                       | 643       | 6,400     | 7,600               |
| Students receiving<br>context-based practice | 413       | 4,578     | 6,600               |







# Rebuild & Renew







WACKER DRIVE RECONSTRUCTION



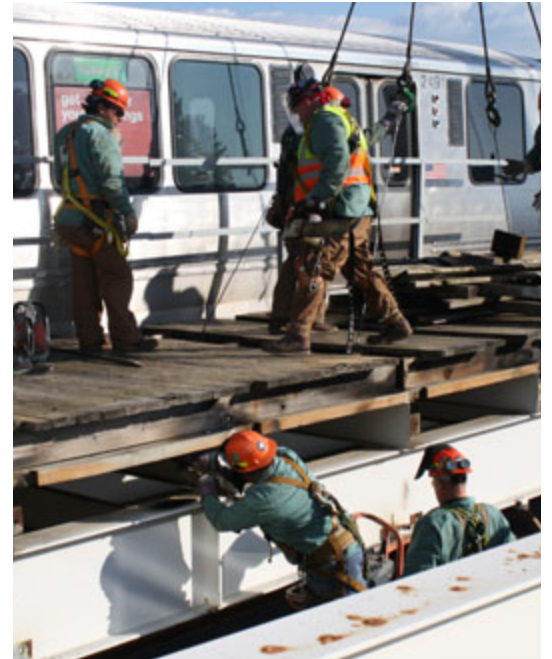


Over its history, Chicago has invested billions of dollars in its transportation infrastructure. Just like a home or car, keeping that investment in excellent condition is essential to maintaining its value and avoiding more expensive repairs in the future.

Asset preservation is a critical activity for CDOT and one of the smartest investments the city can make. Preservation takes a range of forms, from routine maintenance, such as repainting lines or patching potholes, all the way to full reconstruction of a street or bridge that has reached the end of its useful life. Each project presents an opportunity to build better than before; use newer technologies, add more sustainable materials, or implement better management practices.

CDOT relies on its in-house tradesmen to perform regular, routine maintenance. In an average year, these tradesmen resurface 60 miles of residential streets; resurface hundreds of blocks of residential alleys; repaint over 11,500 pavement markings (at about 1,400 intersections); construct 2,000 ADA ramps; raise and lower bridges over 20,000 times; and fill between 400,000 and 700,000 potholes. While 60 miles of resurfacing sounds like a large number, alone it means that at that rate—CDOT would only be able to resurface the city's over 6,000 miles of residential streets just once every century. More resources are necessary.

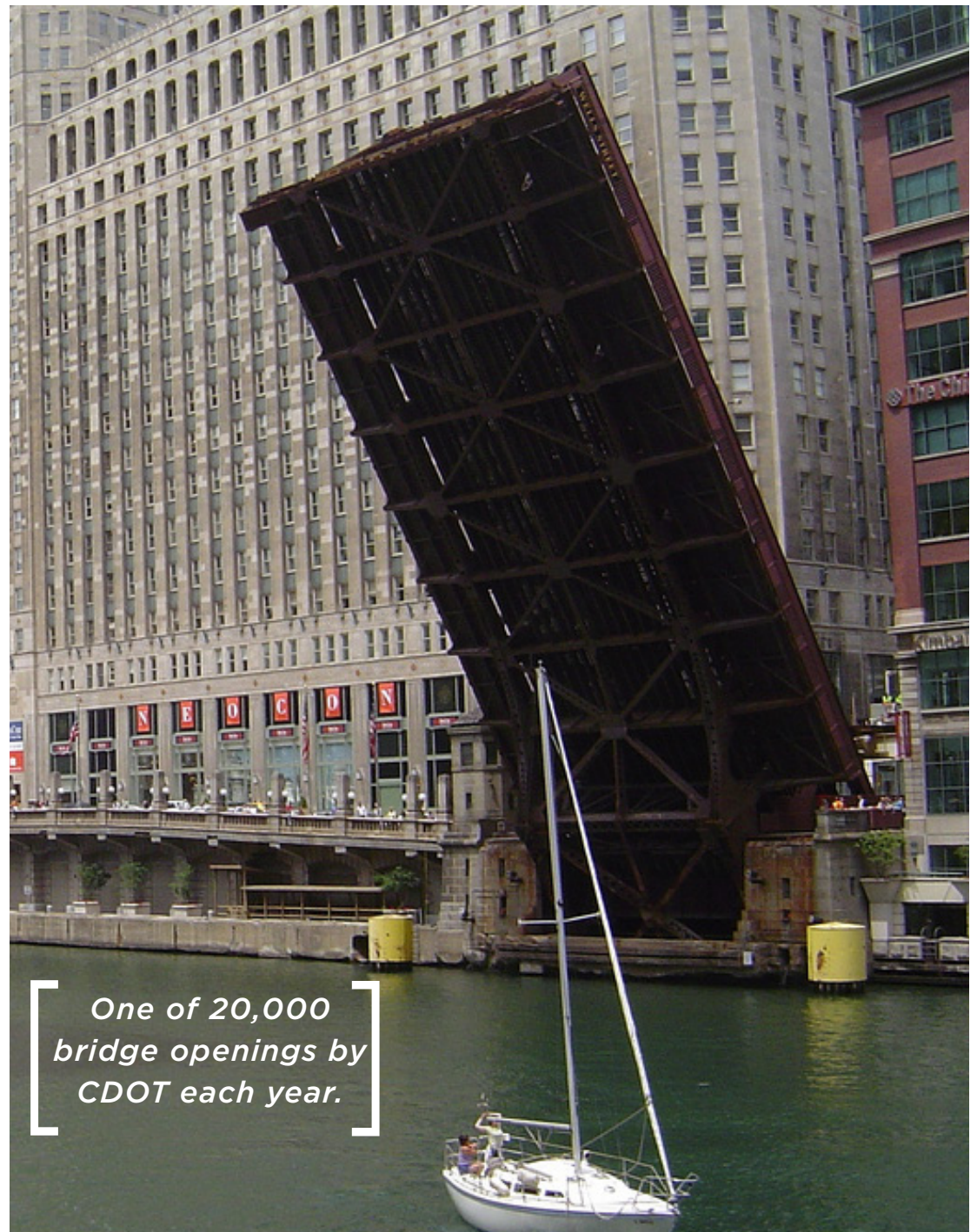
Improving the maintenance of our infrastructure is one of the smartest investments we can make. We intend to get the most out of facilities and this will only be possible by ensuring that maintenance is a part of all decision making processes. We can't just build infrastructure; we need to build everything to last.





## Performance Measures

1. Increase the percentage of major streets with a Pavement Condition Index of 50 or less (out of 100) in the last evaluation that have since been resurfaced.
2. Increase the percentage of bridges with a Bridge Condition Index of 3 (out of 9) in the last evaluation, that have since been repaired or replaced.
3. Reduce the net number of potholes reported each winter and each fiscal year (July-June).
4. Increase the percentage of sidewalk ramps in compliance with current standards.



*One of 20,000  
bridge openings by  
CDOT each year.*





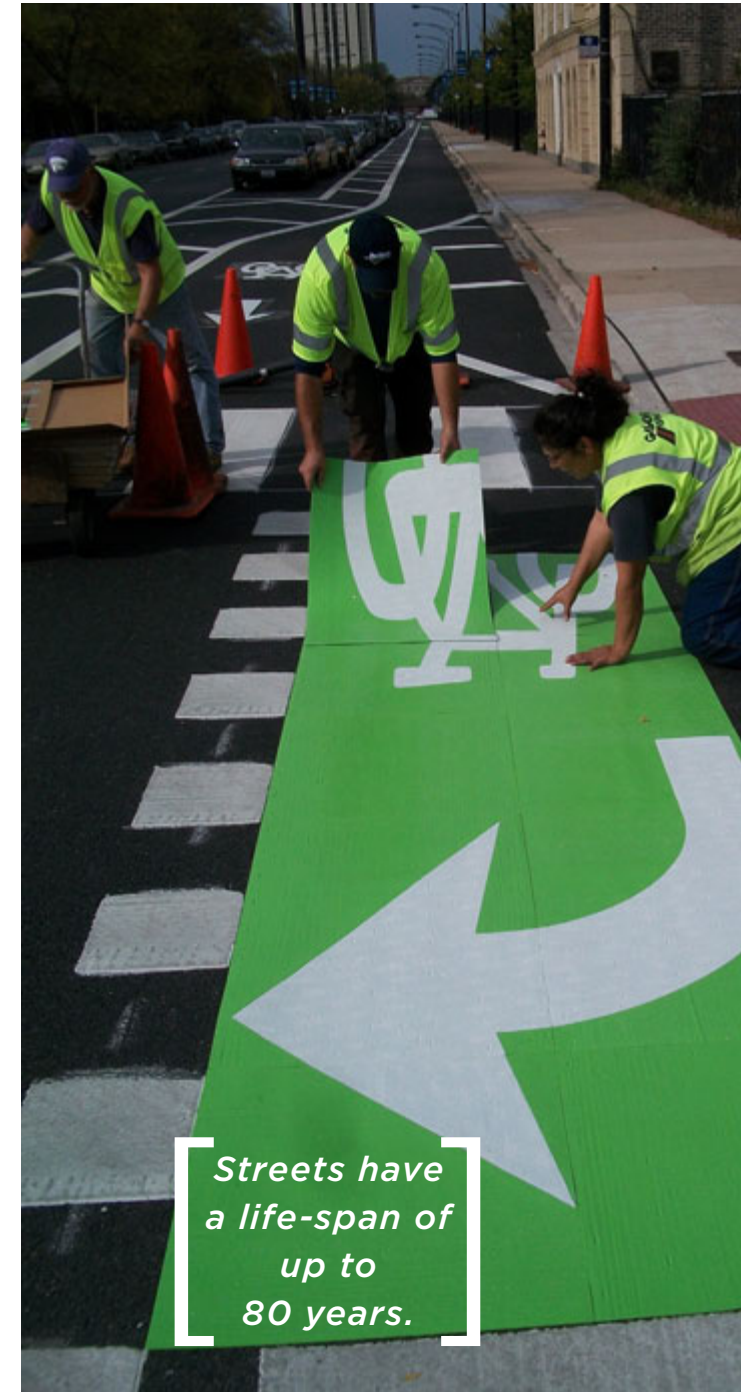
## POLICIES + ACTIONS

# 1

## Make it last with maintenance.

Maintenance rarely draws the big headlines when done well. But as finances tighten, maintenance of our infrastructure is too often deferred. Over time, these deferrals lead to a degradation of the quality of our infrastructure. By the time this degradation becomes noticeable, it has also become more expensive to fix, which leads to a system that can be unattractive, unclear, uncomfortable, or potentially, even unsafe.

On-time, scheduled maintenance is necessary to ensure that all infrastructure will last the full duration of its construction life – as much as 80 years in the case of many of our roadways and bridges. This makes not only good financial sense in terms of making the most of our past investments, but also good environmental sense in terms of minimizing waste and energy use.



*Streets have  
a life-span of  
up to  
80 years.*



## 1 » ACTIONS

- a. Commit to filling every pothole generated by Chicago's winter before the start of the next winter and providing short-term repairs as quickly as possible during the winter to minimize further damage.
- b. Explore new technologies to determine whether pothole repair can be done faster and/or more affordably.
- c. Update the Pavement Condition Index ratings by 2013, then begin a program to resurface the roads in greatest need of repair.
- d. Begin engineering of improvements by 2013 for all bridges with a Bridge Condition Index of 3 or less (on a 1-9 scale), unless closed or removed.
- e. Refresh pavement markings annually on at least 100 miles of major (arterial or collector) streets, and 800 locations on local streets.
- f. Support the CTA as they upgrade track and related elements on the Blue Line's O'Hare branch to eliminate all remaining slow zones.
- g. Renew 125 miles of existing on-street bikeways by 2014, updating configurations as necessary.
- h. Replace sidewalks at 700 residences each year as part of the Shared Cost Sidewalk Program. In this program, home owners pay significantly less than what a private contractor would charge. (Senior citizens and people with disabilities may qualify for a further discount.)

- i. Continue to keep landscaped sections of public way - including medians, boulevards, and plazas - attractive and lively.
- j. Partner with the Department of Streets and Sanitation to ensure that protected bike lanes are kept just as clear of snow and debris as the adjacent vehicle lanes.



## LANDSCAPE MAINTENANCE

The variety of landscaping in the public way is the most fragile infrastructure maintained by CDOT. It is near the edge of the street, surrounded by traffic, inundated by emissions, exposed to the extremes of heat and cold, and bombarded with road salt de-icers in the winter. All of these challenges make plant selection critical for landscape projects. For this reason, CDOT has developed an urban-tolerant plant list from which designers select resilient plant varieties. These planted areas reduce the city's heat island effect, increase the ability to capture storm water, add much needed biomass to help clean the air, and provide a more livable environment for city residents.

One of the largest of CDOT's landscape projects is the construction and maintenance of the Landscape Median Program. Currently, CDOT maintains 73 miles of medians and installs new landscaping at a rate of three to five miles each year. Medians in the central third of the city are maintained by The Chicago Christian Industrial League (CCIL) as part of a job-training program that offers a trade to homeless individuals and those with substance abuse problems. Graduates of the program get job placement with landscape firms throughout the region.



## 2

### Fix it first and build it better.

At some point, any piece of infrastructure will eventually require reconstruction or major rehabilitation. This presents a tremendous opportunity to modernize the infrastructure through the use of new materials and better management techniques. CDOT is currently at work on several large scale reconstruction projects that will ensure Chicago is able to meet the demands of the decades ahead.



*Existing Historic Torrence Bridge - Reconstruction beginning in 2012*



*Proposed Lakefront Trail access bridge at 35th Street*

## 2 » ACTIONS

- a. Finish the Wacker Drive construction project and open both Lower and Upper Wacker Drive by the end of 2012.
- b. Resurface 100 miles of arterial streets by June 2013 to catch up on unmet needs and reduce potholes.
- c. Remove obsolete (and costly-to-maintain) 60's-era roadway overpasses at Western Avenue over Belmont and at Ashland Avenue over Pershing Road and replace each with attractive, modernized intersections that meet Complete Streets standards.
- d. Rebuild the Wells Street Bridge over the Chicago River - which carries CTA Brown Line trains, vehicles, bikes and pedestrian - by 2013.
- e. Complete reconstruction of the historic, seven-decade-old Torrence Avenue vertical lift bridge over the Calumet River by fall 2012.
- f. Complete reconstruction projects underway by summer 2012:
  - » LaSalle Drive in Lincoln Park - including improvements to its pedestrian underpass.
  - » Halsted Street Bridge over the North Branch of the Chicago River -including floor beams, lateral bracing, sidewalk grating and truss repairs. (The sister bridge over the North Branch Channel was replaced with a signature, fixed tiered arch bridge in 2011.)
  - » Ogden Avenue from Fulton to Randolph - including improved clearance under the CTA Green Line.



- » Laramie Viaduct at Polk Street.
- g. Renew and replace infrastructure in Chicago's parks:
  - » Construction by 2013 of shoreline revetments (replacing the retaining wall at Lake Michigan and adjacent surfaces) at three locations: 43rd to 45th Streets, Montrose to Irving Park Road, and Fullerton Avenue by Theatre on the Lake.
  - » Complete the design for a new pedestrian/bicycle access bridge to the Lakefront Trail at 35th Street; remove the aging pedestrian-only structure at that location; then start building the new bridge in 2013.
  - » Rebuild the Fullerton Avenue Bridge over Lincoln Park Lagoon in 2012.
  - » Rebuild the Kedzie Avenue Bridge over Marquette Park Lagoon in 2012.
- h. Begin concept design for rebuilding North Lake Shore Drive from Grand to Hollywood.
- i. Begin design of the Wells-Wentworth Connector between Roosevelt and Cermak Roads.



## WACKER DRIVE CONSTRUCTION

Wacker Drive was included in the original Burnham Plan of Chicago and traverses Chicago's Central Business District. One of its unique features is its two-level viaduct which separates commercial trucking, deliveries and through traffic from upper level traffic.

In 2012, CDOT will enter the second and final phase of a \$300 million reconstruction of Wacker Drive from Lake Street to Congress Parkway. The first phase of this extremely complex project was completed on time and within budget.

The project incorporates numerous pedestrian safety accommodations, including center island pedestrian refuges, decreased roadway lane widths, countdown signal timers, ADA-compliant ramps, and other geometric improvements to accommodate the 100,000 pedestrians that cross Wacker Drive each day.

Additionally, the ramps that form the Wacker Drive Interchange with Congress Parkway will be rebuilt below grade and topped with a new three-and-a-half acre Chicago Park District park.

NOTE: Additional actions to build and rebuild CTA stations, such as the reconstruction of the Clark/Division Station on the Red Line - are named on Page 47, in the Choices for Chicago chapter.



### 3 **Inspect and coordinate.**

There are demands on our public right of ways from many different users: public utilities, private corporations, individual residents, and local businesses.

Over the next 10-20 years, the city will experience 700 miles of water main and sewer improvements, 2,000 miles of gas main replacement, 1,000 miles of electrical cable replacement and more utility improvements. With proper inspection, planning and coordination, all of this work can be completed without significant degradation of our infrastructure, additional public expense, or great inconveniences to users.





### 3 » ACTIONS

- a. Restructure CDOT to improve coordination and oversight of underground utilities and the restoration of roadway cuts.
- b. Improve timeliness for the restoration of “plumber’s cuts” by utilities to within 14 days after completion of work.
- c. Add at least three new public way inspectors.
- d. Invest in technology to streamline and improve the inspection process in the field (such as smartphone, GIS tagging or See Click Fix-type efforts).
- e. Adopt web-based tools for utility coordination and public space coordination between city agencies.



The utility paint color identifies the utility type below - Orange is telephone and Cable T.V.



## OFFICE OF UNDERGROUND COORDINATION

Coordinating utility investments minimizes disruptions to residents and commerce and saves money. CDOT's Office of Underground Coordination (OUC) works to make sure that happens.

OUC is responsible for protecting the city's surface and subsurface infrastructure from damage by construction and maintenance projects. One way it accommodates this is the “DIGGER” service, where project designers get information from all utilities in one request. The OUC also reviews plans to assure that construction work in or adjacent to the Public Way does not conflict with existing utilities.

Contractors working in the Public Way will now be held to a higher level of accountability when restoring streets after construction. New software will be used to better minimize utility company conflicts. Both will reduce the impacts of utility work on our neighborhoods.

A variety of public and private utilities participate in the DIGGER program, including:

- Natural Gas Companies
- ComEd
- Thermal Chicago (Chilled Water)
- CDOT Electrical Operations
- Chicago Dept. of Water Management

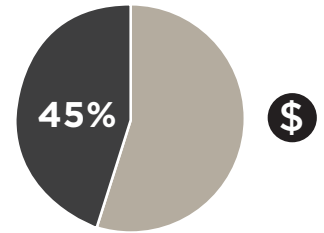
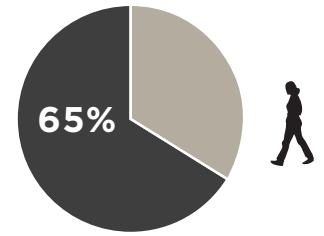


# 4

## Seek equitable and reliable resources for these efforts.

Metropolitan Chicago is home to almost two-thirds of the state's population and pays nearly two-thirds of Illinois' gas tax revenues, yet it receives less than half of these funds for transportation improvements. In today's economic climate, it is critical to the future of Illinois, and in some respects, the whole Midwest, that Chicago be strong and that our transportation systems be competitive globally. A strong Chicago translates to a greater competitive advantage for the whole state.

Transportation drives economy – both literally and figuratively – and the state must equitably invest in Chicago's economy. Some transportation funding distribution formulas are decades-old and do not reflect today's conditions and needs. With the nation rethinking transportation funding and debating a new transportation authorization bill, it is also time for the state to review existing practices.



### 5. 55/45 Split for Illinois Transportation Funding

Despite having 65% of the state's population, our region receives only 45% of the state's road funding.

*[300,000 motorists pass through the circle interchange each day.]*





## 4 » ACTIONS

- a. Work through the Chicago Metropolitan Agency for Planning (CMAP) and the Metropolitan Mayor's Caucus to eliminate the archaic entitlement-based formula distribution of state/federal funds in favor of need-based allocations.
- b. Encourage the Illinois Department of Transportation (IDOT) to remove the arbitrary cap placed on Safe Routes to School funding; instead, apply the formula the federal government uses in providing the funding to states (i.e., by number of school-age children enrolled).
- c. Determine the amount of funds needed for high safety risk location improvements and identify additional, dedicated funding sources beyond the Federal Highway Administration's (FHWA) discretionary Highway Safety Improvement Program.
- d. Establish a city transportation enterprise fund to support continuous and reliable transportation investments in our local system.



**47<sup>th</sup> Street in Bronzeville**



**Bryn Mawr Avenue in Edgewater**



# Choices for Chica







go

***KINZIE STREET,  
AFTER INSTALLATION OF PROTECTED BIKE LANE***



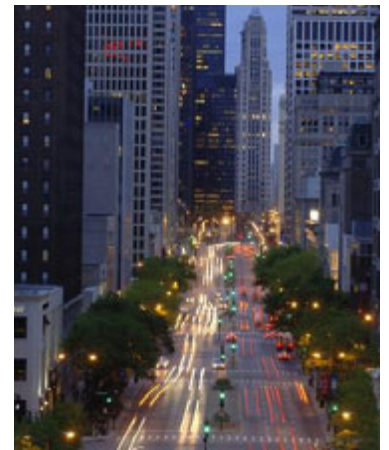
Americans love choice and Chicagoans are no different. We like to choose where we live, what we eat, and how we travel. Fortunately, when it comes to transportation, Chicago has a rich variety of choices: it is as easy to hop on a bike to reach Navy Pier as it is to dash around the Loop on an elevated train. It is generally pleasant and safe to walk whether you are eight years old or eighty. People can choose how they get around Chicago and choose a different way on a different day.

These choices have a much larger impact than simply how fast we get to our destinations; they can also affect our health and our economy.

Vehicle emissions contribute to poor air quality. This can lead to asthma and other respiratory problems, which afflict more than 650,000 children and adults in metropolitan Chicago. More than a third of Chicago children and a whopping 60% of adult residents are either overweight or clinically obese, due in part to lack of physical activity.

The availability of transportation choices also contributes to the amount of money that Chicago households spend on transportation. The Center for Neighborhood Technology estimates that transportation costs Chicago households roughly \$7,500 per year - about 17% of the average household budget, but an even larger share for lower-income neighbors. Residents of auto-dependent areas must spend an average of \$3,000 more per year than those who have access to multiple modes of travel.

Choice is a value we cherish. We know that driving continues to be a very viable choice for the city and region, and CDOT is committed to making it safer and more efficient for those who drive. But getting in a car should be a choice, not a requirement. For our physical and economic health as a city, we will continue to expand and improve the availability of all mode choices.





## Performance Measures

1. Improve the reliability and consistency of workday (6am-6pm Monday-Friday) auto travel times on monitored major streets.
2. Improve CTA on-time performance.
3. Increase the average daily CTA ridership on a majority of routes.
4. Increase the number of residents within a half mile of a bikeway.
5. Increase the share of all trips under five miles made by cycling to at least 5%.



*The  
city has  
facilities  
for  
everyone.*





## POLICIES + ACTIONS

# 1

## More fully and consistently implement Chicago's Complete Streets Policy:

*"The safety and convenience of all users of the transportation system, including pedestrians, bicyclists, transit users and motor vehicle drivers, shall be accommodated and balanced in all types of transportation and development projects and through all phases of a project, so that even the most vulnerable - children, elderly, and persons with disabilities - can travel safely within the public right of way."*

Complete Streets not only increase safety but also add to the economic competitiveness of the city. A transportation system that encourages walking, biking, and transit attracts an increasingly mobile workforce that looks for places that provide a rich quality of life. Implementing Complete Streets and encouraging people to drive less often will also bring environmental benefits.

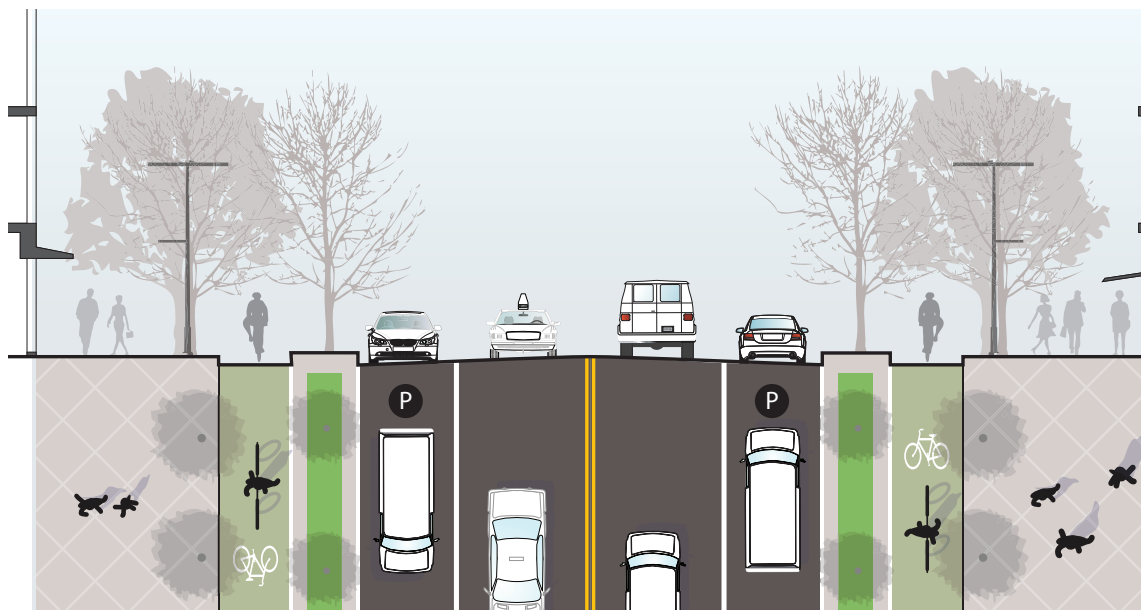
Chicago has been a national leader in designing and implementing Complete Streets. Each and every project is an opportunity for CDOT to improve our overall transportation system for all of its users.



## 1 » ACTIONS

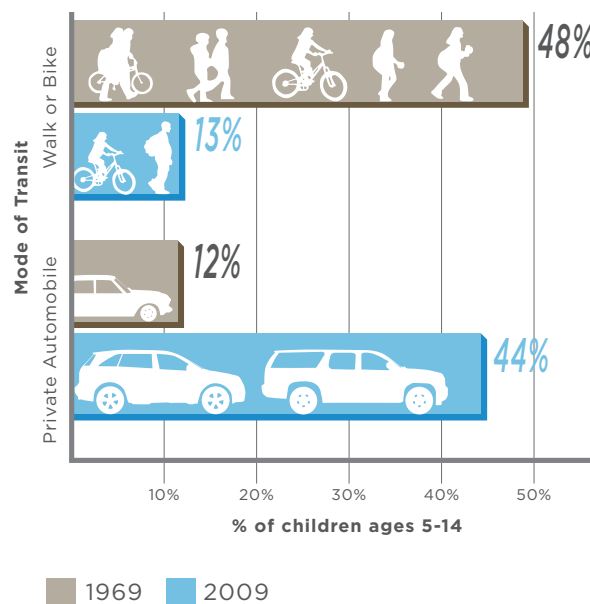
- Improve at least 8,000 curb cuts in 2012–2013 to further enhance access for people with disabilities.
- Develop and adopt Complete Streets Design Guidelines in tandem with Sustainable Design Standards and in collaboration with the Consortium to Lower Obesity in Chicago Children.
- Train all design engineers in Complete Streets approaches.
- Update CDOT's project delivery system to ensure Complete Streets design of roadway projects, and potentially include the use of a Complete Streets checklist during the first phase of design.
- Review all major street resurfacing projects for opportunities to incorporate Complete Streets elements (curb cut replacement, "zebra stripe" crosswalks, refuge islands, bike lanes) and implement selected elements.
- Prepare an updated Complete Streets ordinance or resolution for City Council approval.
- Require all "maintenance of traffic" plans submitted for private and public construction projects to show compliance with Complete Streets standards.





6. Example Complete Streets Rendering

- h. Improve the clearance of snow from sidewalks for pedestrians and people with disabilities: strengthen the sidewalk snow removal ordinance; expand the campaign to improve awareness by property owners of their snow removal responsibilities; begin efforts to better utilize Special Service Areas to clear commercial districts; coordinate volunteers to fill gaps in snow removal on neighborhood sidewalks; and develop a process for tracking progress of snow removal.
- i. Work with the Department of Public Health to implement PlayStreets pilot project in 2012, allowing neighbors to close streets to traffic regularly in warmer months to provide space for active recreation.



7. Childrens' Travel Patterns to School

## SAVING MONEY AND LIVES WITH SAFE CHOICES

Although access to healthy foods and better dietary habits are clearly ways to fight the obesity epidemic, easy, safe, transportation choices are also critical as a health management tool. According to the 2009 National Household Travel Survey, only 13% of children ages 5 to 14 usually walked or biked to school, compared with 48% of students in 1969. Conversely, 12% of children arrived at school by private automobile in 1969, compared with 44% by 2009.

Illinois is the state with the fourth highest rate of childhood obesity, over 20% overall, and 35% for 10 to 17-year olds.<sup>6</sup> In Chicago, 22% of 3 to 7-year olds and 28% of 10 to 13-year olds are clinically obese.<sup>7</sup> As grown-ups, over 3.6 million Illinois adults are clinically obese.

How much is good health worth? Hopefully, to an individual it is priceless, but poor health — particularly obesity — costs Chicagoans dearly.

Studies estimate that health care costs attributable to obesity cost individuals an additional \$1,429 each year and cost the state more than \$700 million annually.<sup>8</sup>

Corporations and businesses also pay. According to a 2008 study, obesity costs private employers in America roughly \$45 billion a year in medical expenditures and work hours lost. Chicago area employer Advocate Health Care estimates that obesity cost them nearly \$6 million in lost productivity in 2009 alone. The Trust for America's Health and the Robert Wood Johnson Foundation reported: "Businesses are reluctant to locate in areas where the population, particularly the future workforce, is unhealthy. High health care costs and lower productivity are unattractive to employers and investors."<sup>9</sup>

How can better transportation be part of the solution?

Parents frequently list traffic safety concerns as one of their top reasons why their children do not walk or bike to school. Safe "active transportation" facilities — sidewalks, bike lanes, trails and appropriate signals and crosswalks make biking, walking and transit access (which begins and ends with a walk trip) safer, more inviting, and even a little bit fun. Better facilities make it easier for parents to team up to provide "walking school buses" for their children instead of carpools. These facilities are and must continue to be a component of Chicago's health agenda.



## 2

### Make Chicago the best big city in America for cycling and walking.

Chicago has a national reputation as a model city for bicycling and walking. The city's 134 miles of on-street bike lanes, 40 miles of marked shared lanes, scenic off-street paths (including the popular Lakefront Trail), more than 12,000 bike racks (the most in the nation), and sheltered parking at transit stations demonstrate Chicago's commitment to building a bike-friendly city. In 2011 alone, CDOT installed the city's first 2 miles of protected bike lanes, as well as 17 miles of standard bike lanes, and 11 miles of marked shared lanes.

Likewise, Chicago is a marvelously walkable city for people of all ages, abilities and purposes with over one-quarter of all trips in the central part of Chicago being made on foot.<sup>10</sup> It's not just our opinion — Chicago was recently designated a "Gold Level" Walk Friendly Community by the Federal Highway Administration, one of only seven in the nation.<sup>11</sup>

Just over 1% of Chicago commuters choose to travel by bicycle. While this number has almost doubled each of the last two decades, it's still less than the enviable 6% rate in Portland, Oregon or the 4.5% achieved in chilly Minneapolis. Even in the central portion of the city, only 2% of all trips (errands, lunch, and commute) are by bicycle. We can do better — much better.

Continuing to invest in the right infrastructure and safety enhancements will keep increasing the number of Chicagoans who choose active transportation and, by extension, contribute to a healthier, happier, and more productive populace and city.



Cyclists + Runners on Lakefront Trail

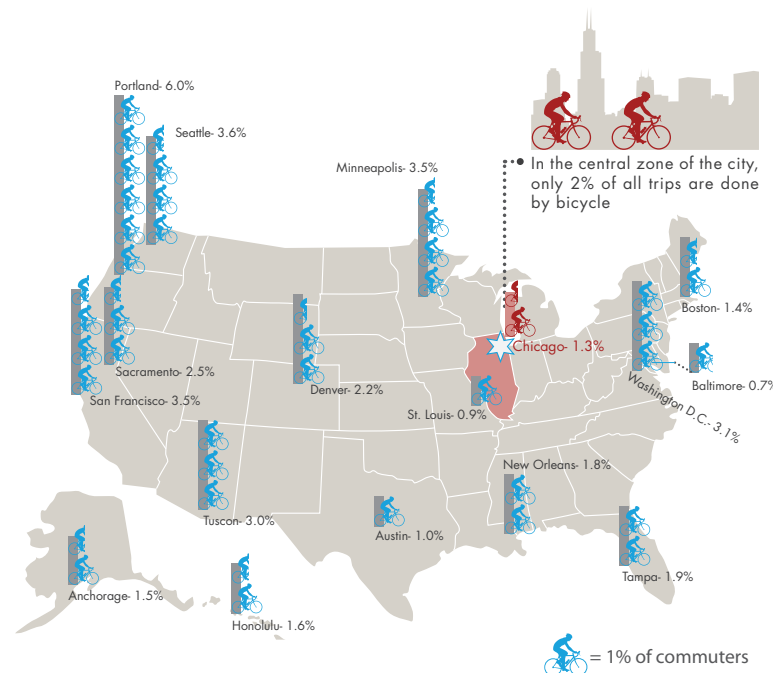


1.3% of  
Chicagoans  
travel by  
bike.



## 2 » ACTIONS

- a. Launch the first phase of a public bike sharing program with 3,000 bikes and 300 stations by 2012 and expand to 4,000 bikes and 400 stations by 2013.
- b. Complete and release three key planning documents in 2012
  - » Pedestrian Master Plan,
  - » Streets for Cycling Plan 2020,
  - » Chicago Trails Plan.
- c. Improve cycling conditions on Chicago streets in several ways:
  - » Install 25 miles of protected bikeways by 2012 and continue design work to be able to reach 100 miles by 2015.
  - » Install 10 additional miles of bike lanes and marked shared lanes each year.
  - » Begin site selection and design of neighborhood greenways to be able to establish 10 miles by 2015.
- d. Grow the network of multi-use trails for non-motorized travel:
  - » Begin construction of the Lakefront Trail flyover bypass to eliminate conflicts with motorists travelling to and from Navy Pier.
  - » Complete the final design for the 2.65 mile Bloomingdale Trail to ensure opening by 2015.
  - » Begin the design of the Weber Spur Trail that will connect the Elston Bike Lane, the Sauganash Trail, and upcoming Forest Preserve and Village of Lincolnwood trails.
  - » Begin the design of the North Branch Riverwalk Trail connection under the Addison Street Bridge.
- e. Add 500 more public bike racks each year, in response to requests.
- f. Explore potential Lakefront Trail improvements during Phase I engineering for the reconstruction of North Lake Shore Drive.
- g. Explore the implementation of “slow zone” blocks where everyone feels comfortable sharing and traveling the street.
- h. Open some boulevards or other major streets to pedestrians, bikes and non-motorized uses exclusively on selected weekend periods.



8. Major U.S. Bicycle Commuter Percentage

## BLOOMINGDALE TRAIL

The 2.65-mile dormant railroad embankment that crosses the northwest side from Logan Square and Humboldt Park to Wicker Park and Bucktown has been called many things. CDOT and our many partners call it an opportunity.

The Bloomingdale Trail project will transform this obsolete freight rail corridor into an elevated trail for cyclists, pedestrians, joggers, and skaters — within a green linear park that will connect a number of smaller parks and unite neighborhoods.

The trail expands opportunities for car-free commuting in the city by connecting to the popular Milwaukee and Elston Avenue bike lanes to the Loop, Humboldt Boulevard, two CTA stations, the Metra Clybourn Station, and several bus routes. It will also serve 12 schools and half a dozen neighborhoods, drawing thousands for travel, exercise, or just leisurely strolls.

The trail will be a showcase for mobility and be an example of Chicago's commitment to environmental stewardship. Any environmental contaminants discovered on this industrial rail corridor will be remediated as part of the project and the new facility will feature state-of-the-art, low-impact design landscapes that manage and clean stormwater.

Mayor Emanuel has committed to opening the trail in his first term in office and CDOT and its partners are off to a rapid start in meeting that challenge. The design is well underway and the project partners are meeting regularly with neighbors, partners and stakeholders to ensure this development is true to the vision they have pursued for years and a catalyst for community improvement.

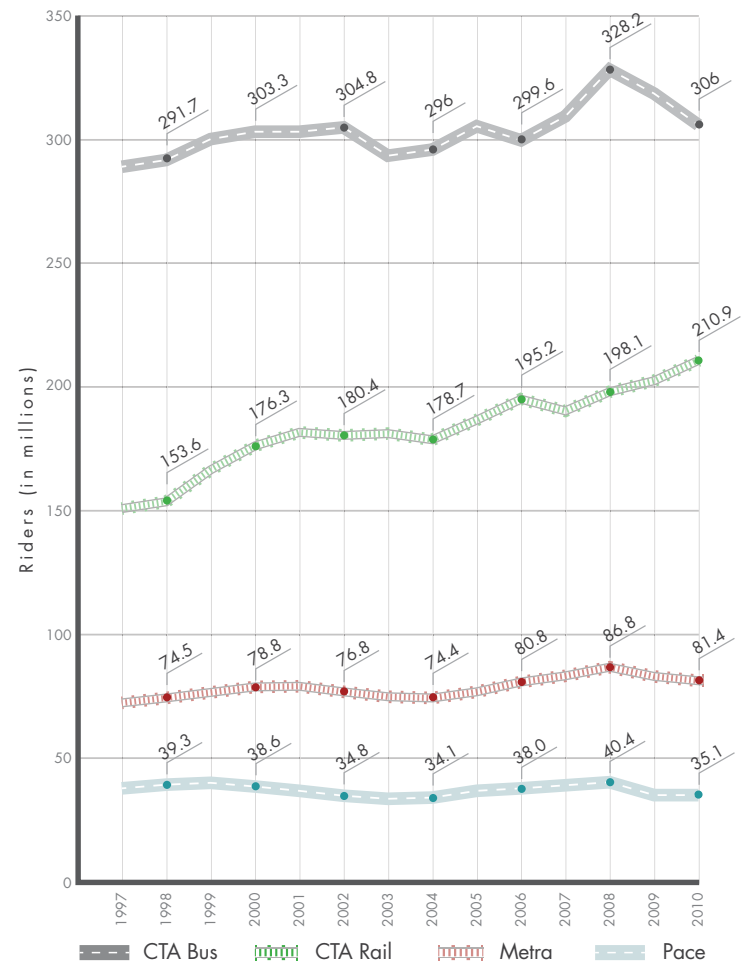


### 3 Provide all residents, workers, and visitors with efficient, affordable, and attractive transit services.

Transit is vital to Chicago's way of life. Beginning operation in 1892, the elevated train system steadily grew, becoming the third busiest rapid transit system in the United States (and second in total mileage). It carries over 700,000 people each weekday and 163 million riders annually. CTA buses provide comprehensive coverage of the city and carry over a million passengers daily. Metra commuter trains provide another 300,000 daily transit trips across the region, and most of these trips have at least one end in the city of Chicago. As millions can attest, transit saves people money. Studies have shown that switching to mass transit can save Chicago households as much as \$400 a month when counting the costs of fuel, insurance, parking and maintenance for vehicle ownership.

CDOT and CTA are partners in this system: CTA buses run on the streets CDOT builds and CTA trains operate on a rail network that includes 50 miles of track and more than 50 stations owned by CDOT. There is an excellent working relationship between our two agencies and we both share the same goals and vision.

This complex transit network has enabled and encouraged the densely built-up city core, but our 120-year old transit system is showing its age. New demands and expectations of riders require modernized systems to meet the city's rapid transit needs and keep Chicago competitive for future generations.

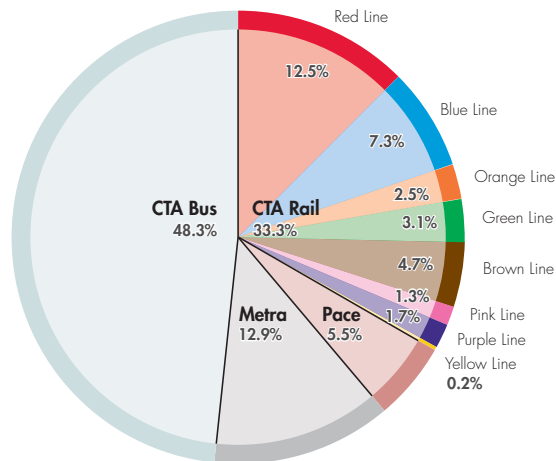


9. Annual Transit Ridership: 1997 - 2010



### 3 » ACTIONS

- a. Build/rebuild four CTA rail stations:
  - » Finish construction of Lake/Morgan Station on the Green/Pink Lines in 2012.
  - » Begin rebuilding Clark/Division Station on the Red Line, starting with a new ADA-accessible entrance at LaSalle Street.
  - » Finish design of the combined Washington/Wabash station on the Loop Elevated and construct by 2014.
  - » Finish design of the new Cermak-McCormick Place station on the Green Line and construct by 2014.
- b. Develop three Bus Rapid Transit (BRT) Corridors in partnership with CTA:
  - » Build BRT facilities for CTA on Jeffrey Boulevard in 2012.
  - » Continue design, engineering and federal grant process for BRT across the Central Area (to Union/Ogilvie stations) with construction to start in 2014.
- c. Support CTA's BRT alternatives analysis for Western and Ashland Avenues.
- d. Analyze city routes for future BRT opportunities.
- e. Install Transit Signal Priority (TSP) equipment at 100 intersections annually, as part of a strategy for 30 corridors and 500 intersections by 2015.
- f. Collaborate with CTA's efforts to complete the full scale planning of the Red Line Reconstruction project by 2012.
- g. Support CTA's ongoing efforts to advance long-range "New Start" rail network expansion plans, including southern extensions of the Red and Orange Lines.



10. 2010, Transit Ridership % by mode



## THE CITY AND THE CTA: A 65-YEAR PARTNERSHIP

The first transit facilities in Chicago - including the Loop, Lake Street and Jackson Park elevated lines - were all built and operated by private sector concerns. After the financial decline of these private operators up to and through World War II, the public sector took over.

In the 1940's, the city of Chicago led the construction of the State and Dearborn Street subways. A state-authorized referendum created the Chicago Transit Authority (CTA) in 1947 to buy rapid transit, trolley and bus lines from failed private transportation providers, and continue their operations as a public service.

The City made agreements for CTA to use and maintain the subways, while the City retained ownership. The City built most of a relocated Congress line in the 1950's, within the median of a superhighway later named the Eisenhower Expressway. Then in the 1960's, the City similarly built lines in the medians of the Dan Ryan and Kennedy Expressways with federal monies (66%) and City bond funds. CTA took over operation of these lines upon completion, though the City again maintained ownership. Similar arrangements occurred with the extension of the Kennedy line to O'Hare in 1984.

After a planned Crosstown Expressway project was cancelled, the City was eventually able to reprogram \$931 million to transit improvements. Over \$520 million was used to build and buy new rail cars for the Southwest Orange line, completed in 1993. The remainder was programmed by the City to renovate and replace elevated track, structure, and stations; renovate subway facilities; and build the track link that allowed for reorganizing the Red and Green lines.

The City works with the CTA to ensure that these facilities meet their operating needs. CDOT focuses on architectural and engineering projects, especially downtown, while passing funds on to the CTA for signals, power and specialized labor such as track crews.

In total, the City has built and owns 50 of the 105 miles in the CTA rapid transit system, four rail storage yards, and four rail car maintenance facilities. In 2011, this partnership continued as CDOT completed a major reconstruction of the Grand/State Station and was at work on a new Morgan Station serving the Green and Pink Lines.



# 4

## Improve intermodal connections and operations.

A transit rider is always a pedestrian for at least part of their trip. Metra riders often transfers to CTA buses. Motorists and cyclists can both have their own “park and ride” facilities. Yet the logistics of making these connections happen can be a challenge.

Improving facilities is part of the solution, but scheduling, travel information and wayfinding are also big parts of the equation. CDOT is committed to working with our transit partners at the Regional Transit Authority (RTA), CTA, Metra, and Pace and with technology partners to expand the city’s rich travel choices and improve connections between them.





## 4 » ACTIONS

- a. Improve transfers at Union Station, the region's busiest transit facility:
  - » Begin design and acquire land for a new rail-bus transfer center south of Jackson Street, to open in 2014 along with Central Area BRT.
  - » Finish a station master plan study to assess future options for improving transfers and increasing capacity. Begin computer simulations to further refine these options.
  - » Coordinate with Amtrak (owner of the station) on their overall plans for changes in operations and facilities over the next 20 years.
- b. Work to add customized BusTracker and intermodal information on monitors in bus shelters, beginning with Bus Rapid Transit routes.
- c. Upgrade "first mile/last mile" transit access.
  - » Install high-capacity, double-deck bike racks in five additional CTA or Metra stations to improve transit connections for cyclists.
  - » Install Bike Sharing stations at or near all CTA or Metra stations in the bike sharing service area, including the four downtown Metra terminals (Union, Ogilvie, Millennium, LaSalle).
  - » Make sidewalk, crosswalk, and bike parking improvements where needed.
  - » Complete the Access to Transit Data Study, reporting mode of access information and user perception of transit access conditions for 48 CTA stations in Chicago.

- d. Support the RTA's project to improve wayfinding signs at interagency transit transfer points, beginning with the Jackson-Van Buren corridor.
- e. Support CTA and RTA efforts to implement a unified fare system and/or electronic payment system for transit operators.
- f. Work with the Department of Housing and Economic Development to identify city-owned properties for expanded car-sharing and bike parking locations at transit stations.
- g. Work with CTA and Metra to designate agency pedestrian and bicycle coordinators.



## BUS RAPID TRANSIT

What do you get when you combine the limited stops and fast boarding of rapid transit with the service flexibility, fast implementation and affordability of bus transit service? Bus Rapid Transit, or "BRT" for short.

Details of BRT service in Chicago will vary from corridor to corridor based on context (and will have a catchier name than "BRT"), but each starts with clearly dedicated bus lanes. Other options in the "toolbox" to be used in some projects include:

- Fewer stops
- Traffic Signal Priority – including "queue jumps"
- Boarding area canopies
- Real time bus arrival signs
- Wide doors/Bus floor level boarding
- Prepaid boarding
- Streetscaping
- Increased capacity

There are several BRT projects in the works. The Jeffrey Corridor project will be the first demonstration in the city of the potential of BRT. It reduces the number of stops and improves rush hour travel on one of Chicago's most popular express routes, more than two miles from the nearest rail rapid transit service.

The Central Area East-West corridor will cross the heart of the Loop, improving travel times and comfort for users of seven bus routes (including the Jeffrey Express) that serve Ogilvie and/or Union stations, but also continue onward to Navy Pier, Streeterville, River East, the Illinois Medical District, the United Center, Milwaukee Avenue, Madison Street, and Blue Island Avenue.

Western and Ashland Avenues are currently being studied as future BRT routes. These popular bus routes traverse the city and provide access to several different CTA and Metra rail stations.



# 5

## Ensure predictable, safe, and reliable motor vehicle operations.

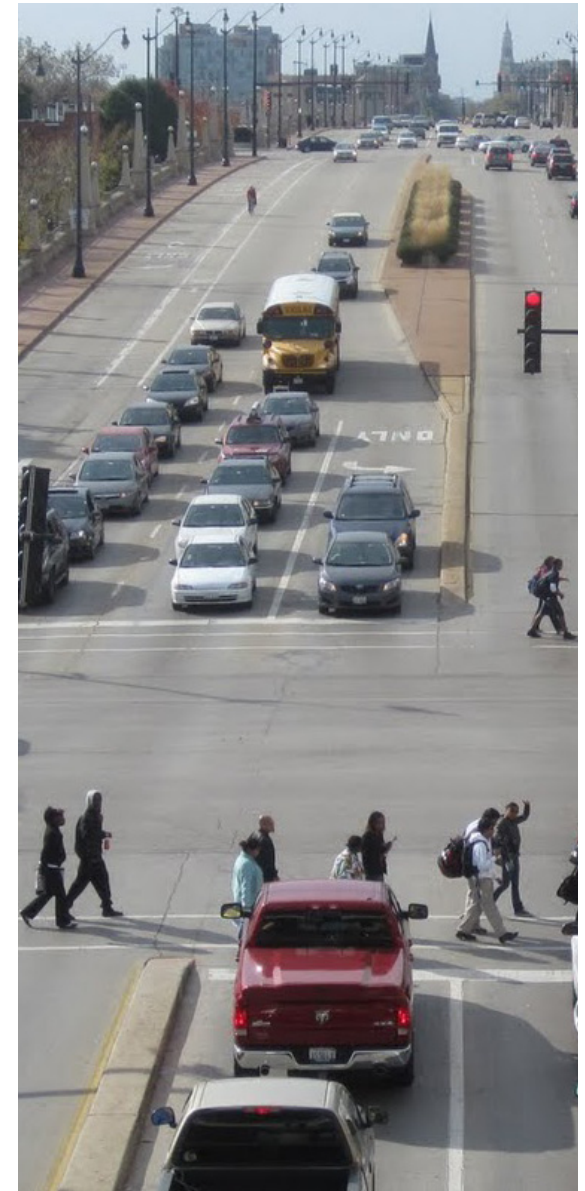
Chicago is a congested city. Frequently, commute times can vary significantly based on unpredictable traffic conditions. While there are limits to how much can be done to make personal vehicle commutes shorter or faster in a mature city, there is much that can be done to reduce delay and make travel time more predictable.

Motor vehicles are – and will continue to be – a critical transportation choice for Chicagoans. Sections of Cicero Avenue, Congress Parkway, Harlem Avenue, Pulaski Road and Stony Island Avenue each carry more than 50,000 vehicles a day; segments of Lake Shore Drive have daily volumes that exceed 110,000 vehicles.

Over the next two years, CDOT will take a number of actions to improve driving conditions, including: better coordination to improve incident response (e.g., clearing crashes or routing traffic around bottlenecks); signal timing changes for smoother traffic flow; and better communications with motorists about current conditions.

In 2011, CDOT introduced [www.chicagotraffictracker.com](http://www.chicagotraffictracker.com), a site that uses GPS data from 2,000 CTA buses to help monitor congestion and predict auto travel times on major streets.

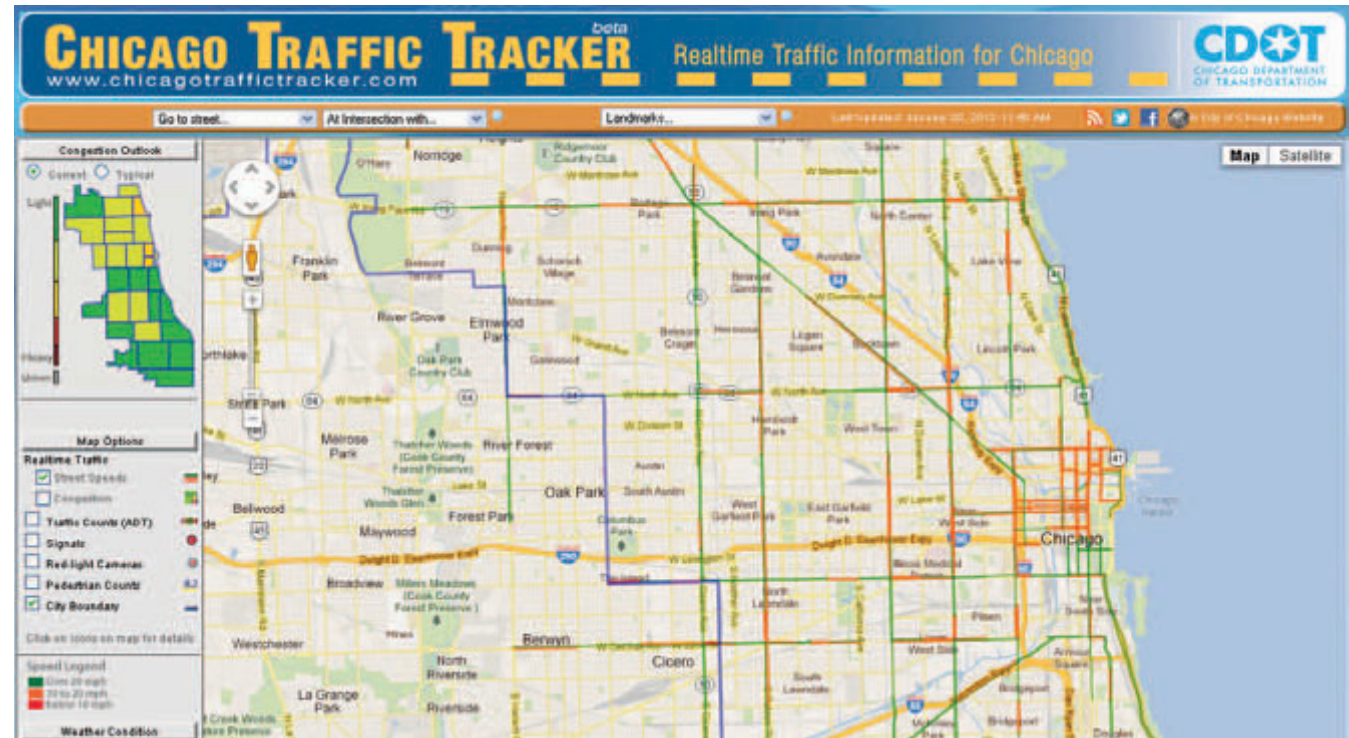
Safe and efficient vehicular mobility means safer and more predictable travel for all other modes as well. Clear and timely information about traffic and transit conditions and options can help everyone make better choices about how, when, and where they travel in and around Chicago.





## 5 » ACTIONS

- a. Enhance the new [www.chicagotraffictracker.com](http://www.chicagotraffictracker.com) with even better information on current traffic conditions, live video from available traffic cameras, and opportunities to receive updates through email or text message alerts. Also, work with OEMC to develop means to exchange information with "Gateway System" Expressway monitors, data and RTA's "GoROO" travel information site.
- b. Finish the final phase of the Traffic Management Center, integrating 9-1-1 dispatch data and other systems to better manage and operate the City's transportation network.
- c. Modernize 175 intersections with installation of Advanced Traffic Controllers (ATC) for improved vehicle operations, safety and throughput; secure funding for additional intersections.
- d. Install variable message signs (VMS) and speed indicator signs at selected locations on key arterials to provide information on current traffic conditions.
- e. Continue design to deploy new signal interconnect systems using hybrid fiber/wireless communications.
- f. Upgrade existing interconnects on Lake Shore Drive (near Museum Campus) and Irving Park Roads with adaptive signal control (ASC) technology.
- g. Secure funding for a Chicago citywide signal optimization plan that will evaluate and prioritize revisions to signal timing and operations on approximately two-thirds of the city's signals over a six-year period.
- h. Expand traffic signal database access to CDOT field office users for faster updates and greater utilization.





# Serving Chicagoa

A vibrant, high-angle photograph of a busy city street in Chicago. In the foreground, several pedestrians are crossing a street with white crosswalk stripes. A woman in a black jacket and bright red pants is walking towards the right, carrying a bag. To her left, another person in a patterned jacket and dark pants is walking. In the background, a red car and a silver car are visible on the street. Tall, modern skyscrapers line the street under a clear blue sky. A semi-transparent red banner with the text "Serving Chicagoa" in white is overlaid across the middle of the image.





ns





As a department, CDOT is not just oriented to moving people. We are also committed to continually improving the service we provide to the Chicagoans who are our customers, our funders, and our neighbors. We pledge to deliver high-quality customer service.

Requests for service from CDOT and other City departments can be made by any citizen by calling 311. Many types of service can also be requested through the City's 311 website. The City's Customer Service Request system sorts CDOT requests into 45 public "request types", which are then assigned to various divisions of CDOT for action within a set period of time.

This system is used to ensure that CDOT provides high-quality, timely service to fix the problems that have been reported. For example, requests to repair or replace one-way signs need to be completed within three days; in 2011, the average response was 1.03 days. In the next two years, CDOT will raise the bar on its existing performance standards.

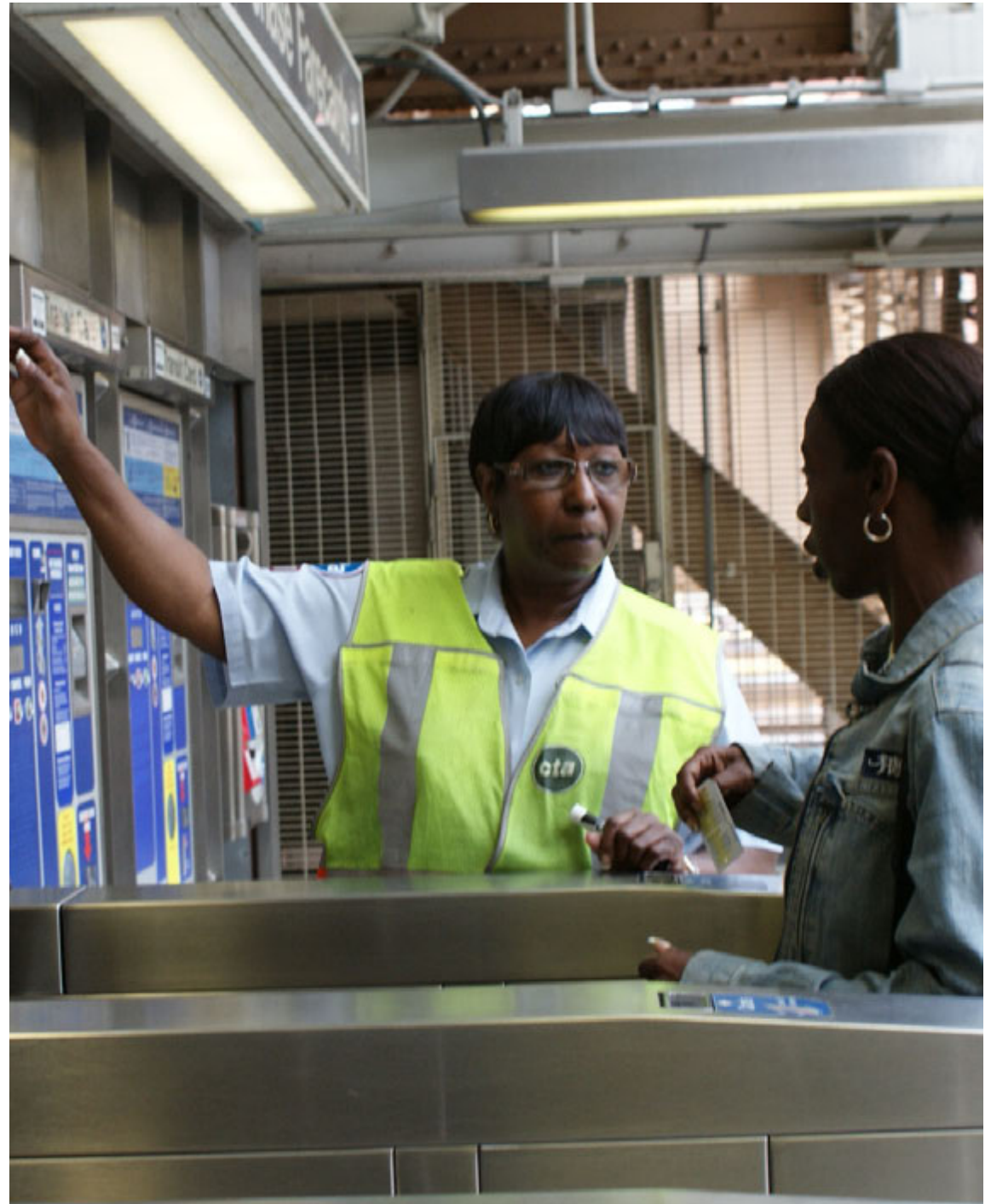
But that's only half the challenge. We must also be more clear about when, where and how we are providing these services. A key to this is making sure we make the best use of current technologies. In partnership with the City's Department of Innovation and Technology (DoIT), CDOT will use social media, smartphones, open data, and more, to not only hear and respond to requests for repairs and improvements, but also to recognize and prevent problems before they occur.





## Performance Measures

1. Increase the percentage of Customer Service Requests and 311 requests resolved within the “allowable duration” to at least 95%.
2. Increase the percentage of Customer Service Requests and 311 request categories where the average response time is less than half the “allowable duration” to at least 50% (and reduce the “allowable duration” when feasible).
3. Increase the percentage of potholes patched or fixed within 72 hours.
4. Increase the percentage of social media inquiries that receive a usable response by the next business day.





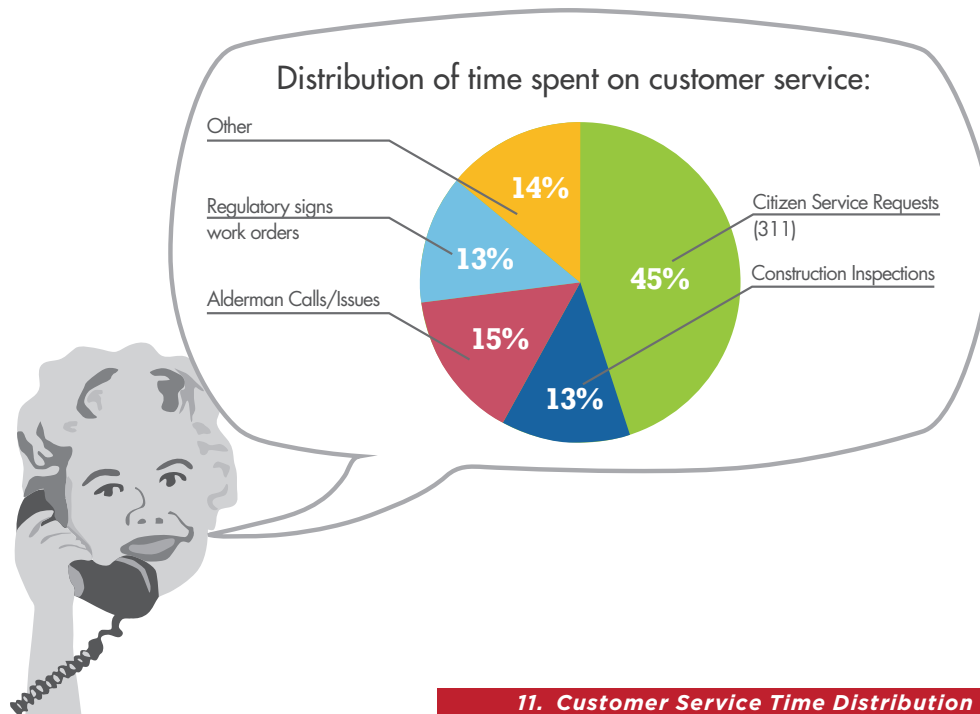
# 1

## Improve responsiveness.

It takes more than inspectors on city staff to know where our transportation system isn't working. Fortunately, there are over five million eyes on Chicago's streets. Making it easier for people to identify and report issues will get those issues resolved more quickly.

Requests for service come from a wide range of sources and differ greatly in size and scope. Nonetheless, each request must be given the utmost attention and responded to in a timely manner. This includes efficient mobilization and effective response to weather-related and other emergency situations.

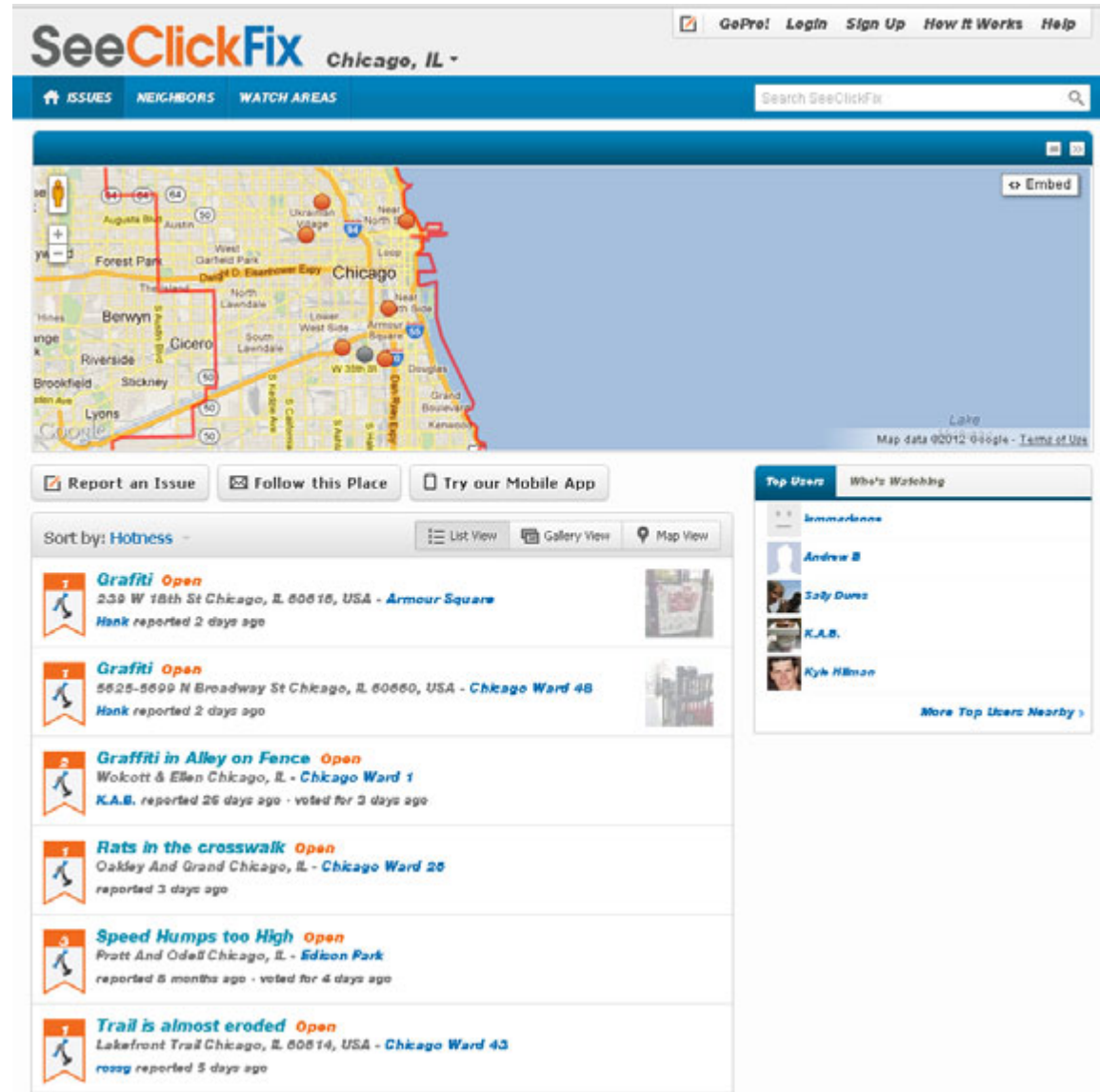
Sometimes, the solutions may take time. That's why it is also important to allow people to know the status of their request, so they know that their concern has been heard and that their input is useful.





## 1 » ACTIONS

- a. Partner with DoIT to explore ways for smartphone users to submit service requests with a mobile application (such as SeeClickFix) and utilize the phone's camera in a way that works with and enhances the existing 311 system.
- b. Patch potholes within 72 hours and develop an online "dashboard" that reports the progress in fixing potholes during peak repair season in winter/spring.
- c. Use the 311 system to monitor sidewalk snow removal concerns and address problem locations.
- d. Institute a process to better address ADA complaints filed through the 311 system.
- e. Encourage the use of the CDOT website to suggest bike rack locations, and post status of all requests to website within 7 days and update as progress occurs.
- f. Re-evaluate Customer Service "request types" to make sure the data is relevant and as useful as possible for tracking response times.





## 2

### Enhance transparency and public communications.

Chicagans want to know whether or not their government agencies are working. We will increase our transparency by providing more information, using new ways of disseminating information and creating a dialogue with citizens. This will help assure the public that their tax dollars are well-spent and will create more accountability. Our website, [www.chicagodot.org](http://www.chicagodot.org), is an important component of public communications.



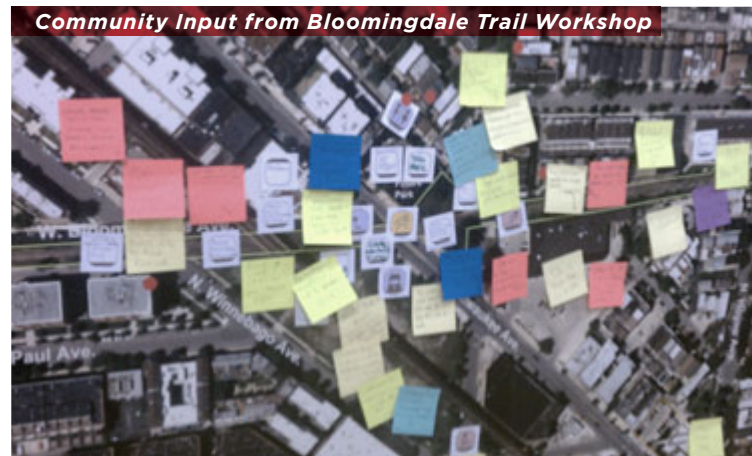


## 2 » ACTIONS

- Reorganize the CDOT website to simplify access to information that is frequently searched and provide clear information about upcoming and current projects.
- Respond to at least 90% of Twitter and other social media inquiries promptly – within one business day, preferably within two hours.
- Promote and expand the use by staff of other social media outlets, including CDOT's Facebook, Flickr, and YouTube feeds.
- Develop a departmental blog to provide more immediate news to residents.
- As part of Mayor Emanuel's "Open Portal" program, make data-sets available to the public and encourage development of applications for the analysis of that data. Explore further uses of Google Maps as a base for project information.
- Develop a "dashboard" to report progress against goals and actions from this report (and elsewhere) as Key Performance Indicators (KPIs). Progress on the KPI goals will be published on CDOT's website.
- Develop and prominently publish an easy to understand explanation of where and when different traffic management techniques or control devices could be used.



**Community Input from Bloomingdale Trail Workshop**



## KEY PERFORMANCE INDICATORS

In order to provide quick, high quality service to all Chicago residents, we have identified the following performance indicators for completing repairs and inspections in response to service requests.

### Within 1 day:

- Stop sign missing
- Traffic light out
- Wire down

### Within 3 days:

- Pavement cave-in survey
- One-way sign missing

### Within 4 days:

- Outage of multiple streetlights

### Within 7 days:

- Pothole in street
- Public way obstruction

### Within 10 days:

- Pothole in alley
- Inspect public way construction
- Outage of a single streetlight

### Within 20 days:

- Non-emergency signs

### Within 30 days:

- Outage of alley streetlight
- Sidewalk survey

### Within 120 days, less if weather permits

- Street line/markings maintenance



# 3

## Disseminate customer information.

Information is power. The quantity and quality of information that people have about transportation allows them to make better choices. Milwaukee bus, Blue Line or bicycle? Red Line or Brown Line at Belmont? Stevenson Expressway, Archer Avenue or the Orange Line? Wait for the bus or walk? Stay on this road or detour? The only way to make an informed decision is with quality, real-time information.

Over the last few years, CDOT and other agencies have made more transportation information available to the public. We will continue to provide information and use technology to make it available to everyone when and where it is helpful. We will also improve access to published materials, such as maps and educational information, to empower Chicagoans to make well-informed decisions about transportation.



Share the Road safety outreach



### 3 » ACTIONS

- a. Install multi-modal information monitors in CTA bus shelters that display TravelTracker, bike sharing, car sharing, and traffic information.
- b. Continue to distribute at least 50,000 bicycle maps per year.
- c. Provide training, classes and information through the Chicago Center for Green Technology for individuals and institutions to learn about more sustainable transportation, homes, workplaces and communities.
- d. Explore opportunities to cooperate with popular online map services, including correction of errors and notification of extended closures.

NOTE: Several more customer information actions are discussed in other chapters, including:

- » Bicycle Ambassadors and Safe Route Ambassadors (Page 24 + 25)
- » Bike Sharing Program (Page 45 + 49)
- » RTA Wayfinding (Page 49)
- » Chicagotrafficracker.com (Page 50 + 51)
- » Variable Message Signs (Page 51)
- » Travel Demand Management (Page 69)
- » Truck Routes, Site Maps, and GIS layers (Page 87)





# 4

## Build agency and staff capacities and increase efficiencies.

Smart cities continually invest in their workforce. In this economy, the ability to find a good paying job is paramount to many. All the building, rebuilding, installing and other actions identified in these pages will create a considerable amount of jobs and opportunities for residents to learn new skills and trades.

No matter how big or small the project, Chicagoans deserve a quality work product from their public servants that is completed as efficiently and economically as possible. Looking for ways to “work smarter” is crucial to reaching that goal.





## 4 » ACTIONS

- a. Expand the use of apprenticeships to establish a skilled workforce for the future and ensure that the institutional knowledge of today's workers is passed on.
- b. Train skilled trades employees in new technologies.
- c. Partner with Greencorps Chicago to train workers and fill job opportunities with city residents.
- d. Use the Chicago Center for Green Technology to provide training in "green collar" jobs and encourage the growth of environmentally-inspired businesses.
- e. Improve databases to ensure that staff users at all agencies can access relevant data, ordinances, private benefit signs, and driveway permits for proper and consistent permits, installations, and enforcement.



*Chicago Center for Green Technology Seminar*





# A More Sustainable







# le City

*LASALLE STREET MEDIAN IN APRIL*



## a more sustainable city

Cities are among the most environmentally sustainable of human habitations. Urban residents tend to drive less, consume less energy, and produce less water run-off per capita than their suburban and rural counterparts.

Because the density of cities generally means more people and less open space on individual lots, the public streets and rights of way are a crucial resource for expanding the tree canopy, diversifying habitats, and managing stormwater. There is abundant opportunity to accomplish this in the 23% of the land area of the city of Chicago found in the public right of way such as streets and alleys.

For more than a decade, Chicago has been the nation's leader in building green streets that refresh and restore the urban environment. We have conducted five pilot projects to find the best way to pave streets using recycled asphalt. Over 20 cities have replicated our award-winning Green Alley Program, which has been recognized in over 65 publications and now is a case study in environmental design textbooks. Programs like Greencorps Chicago train hard-to-employ individuals for more robust futures in the "Green Collar" economy.

We have diversified and expanded Chicago's urban forest. Increased tree canopy cover provides shade to reduce the "urban heat island" effect in summer, improves air and water quality, reduces noise pollution, and improves the quality of urban life. Tree planting has the ability to revitalize neighborhoods.

CDOT will continue to be a leader in innovating and demonstrating to the nation the value and viability of building green.





## Performance Measures

1. Increase the tree canopy and public right of way tree count.
2. Reduce the number of Ozone Action Days.
3. Increase the recycling of construction waste to 75% of eligible materials.



*Chicago is a  
national leader  
in building  
greenstreets.*







## POLICIES + ACTIONS

# 1

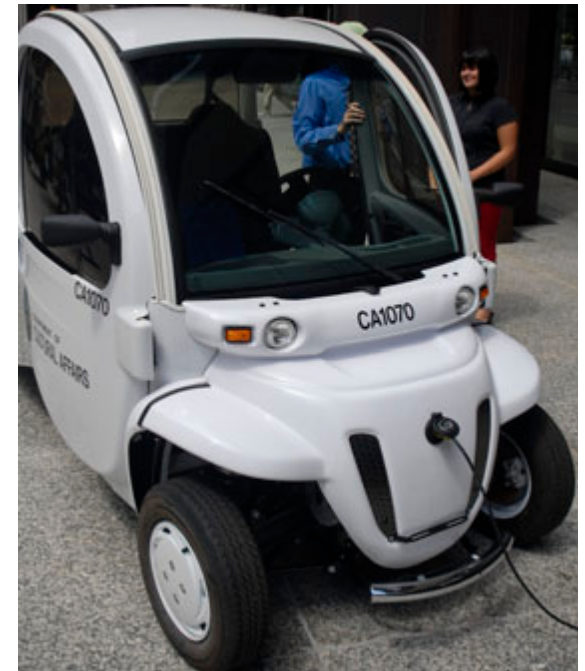
## Support the Chicago Climate Action Plan.

Chicago is not a city that takes a “wait and see” position on climate change, especially when many viable and cost-effective actions are possible to reduce carbon emissions. This is especially true when such actions also improve the beauty, livability and economic competitiveness of Chicago.

The Chicago Climate Action Plan was developed by a diverse task force of city leaders. It proposed an initial reduction in Chicago’s carbon output by 2020 to at least 25% below 1990 levels. This goal can be achieved through integrated and holistic actions among all city departments. Currently 21% of the city’s greenhouse gas emissions come from our transportation vehicles – buses, trucks, planes and autos. Expanding non-fossil fuel dependent modes of transport (bicycle, walking and electric vehicles) and enabling development patterns that reduce our need to drive have the potential to significantly reduce this impact and ensure a more sustainable, prosperous future for Chicago.



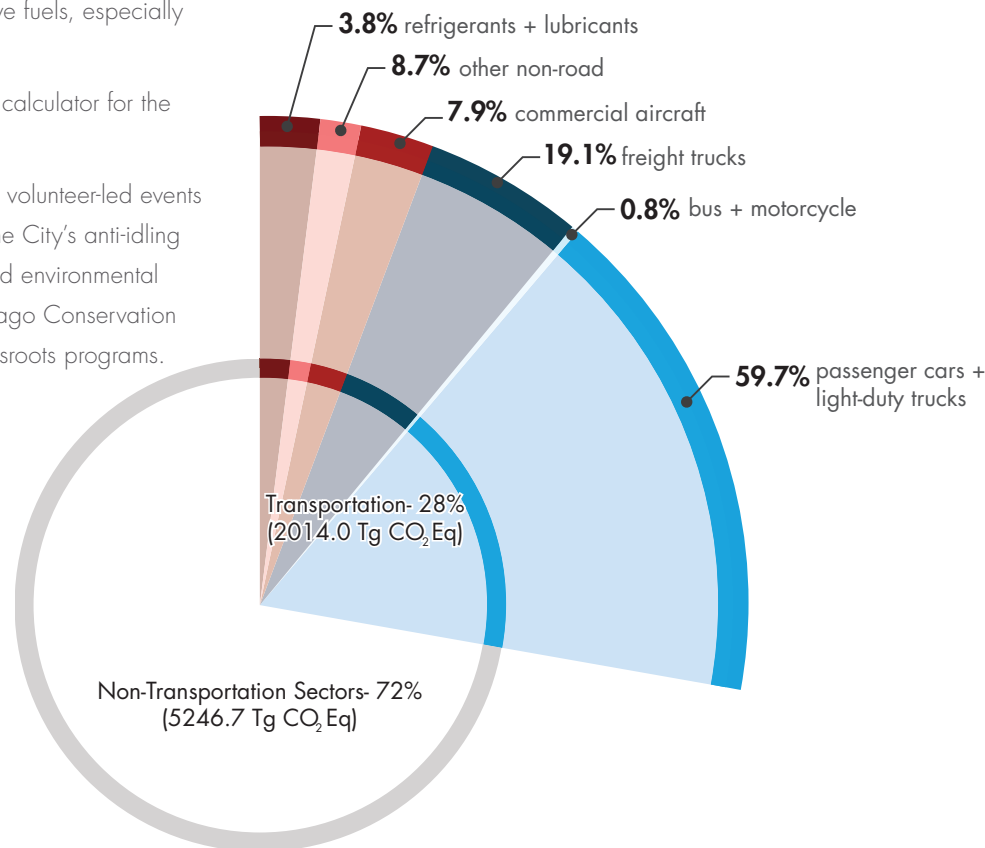
Green Taxi





## 1 » ACTIONS

- Launch a Travel Demand Management (TDM) program and sign up 100 employers of 50 employees or more for commuter benefits or alternative commute programs under the newly-established TDM program.
- Manage the creation of the world's densest network of quick-charge stations for electric vehicles, installing 280 stations using a combination of state, federal and private investment funds.
- Promote further use of Clean Natural Gas (CNG) and other alternative fuels, especially by the taxicab industry.
- Implement a carbon travel calculator for the city.
- Support community-based, volunteer-led events and trainings to promote the City's anti-idling ordinance and other related environmental practices through the Chicago Conservation Corps (C3) and other grassroots programs.



12. Greenhouse Gas (GHG) Emissions from Transportation

## ALTERNATIVE FUELS DEPLOYMENT & THE CHICAGO AREA CLEAN CITIES COALITION

CDOT is managing what will become the nation's most progressive electric vehicle infrastructure project. Using \$2 million in federal and state funding to leverage \$6.9 million in private funds, 207 "Level 2" chargers and 73 Direct Current (DC) quick charge stations will soon be installed. The program will provide 53 full-time jobs for installation, maintenance and operation and is just the first phase of electric vehicle infrastructure in the Chicago region.

An additional \$15 million in federal funding will be used to improve regional air quality by installing or upgrading 28 alternative fueling stations and by retrofitting or purchasing 400 alternative fuel & hybrid vehicles. The combined projects will save 3.8 million gallons of gasoline each year and support 77 jobs in the region. This funding is being leveraged with \$24 million in private and public investment.

Both projects continue Chicago's efforts in the Chicago Area Clean Cities (CACC) coalition, a voluntary organization dedicated to encouraging the use of clean fuels and clean vehicle technologies in the Chicago metropolitan area. It is one of 90 such city coalitions across the country participating in the U.S. Department of Energy's Clean Cities program.

CACC also supports local educational opportunities for clean vehicle technologies and fuels. For over 15 years, Chicago-area fleet managers and policy makers have participated in CACC-sponsored workshops and "ride and drives." More information about the coalition, advanced vehicle technologies, and the location of alternative fuel stations in Chicago can be found at [www.chicagocleancities.org](http://www.chicagocleancities.org).



## 2

### Enhance CDOT's GreenStreets Program.

Studies prove that tree planting is one of the most beneficial and affordable infrastructure improvements a municipality can implement. Trees appreciate in value and have economic, ecological, and social benefits.

In our urban forest, trees also play a vital role in stormwater management, urban heat island reduction, improved air and water quality, reduced carbon emissions, greater carbon sequestration, and even increased property values.

Chicago's GreenStreets program plants trees along and near major streets, and targets areas with high "urban heat island" effects and lower levels of tree canopy cover. Since its creation twenty years ago, the program has planted 71,185 trees. Combined with other sources, 3,900 trees were planted in 2011 alone.



Indiana Avenue Median Planting



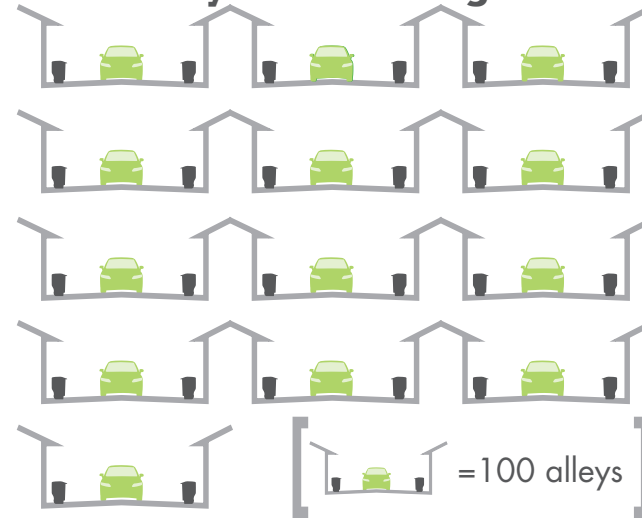
*The every tree counts campaign illustrated the environmental value of street trees.*



## 2 » ACTIONS

- Continue tree planting in the public right of way to support a citywide increase in canopy cover from 17% to 20% by 2020, including federally funded initiatives on the South and West Sides in 2012- 2013.
- Introduce new tree cultivars (cultivated species varieties) annually as part of the species diversity rule to foster healthier functional urban forests.
- Calculate and report annual environmental benefits for Chicago's trees and associated dollar values of newly-planted street trees through the National Tree Benefits Calculator at [www.davey.com/ask-the-expert/tree-calculator/national-tree-benefit-calculator.aspx](http://www.davey.com/ask-the-expert/tree-calculator/national-tree-benefit-calculator.aspx).
- Conduct three training presentations to neighborhood business groups or other organizations on the measurable benefits that trees provide to retail sales and other economic activities.

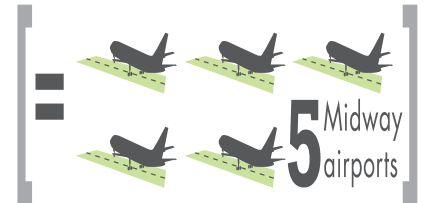
### The City of Chicago has:



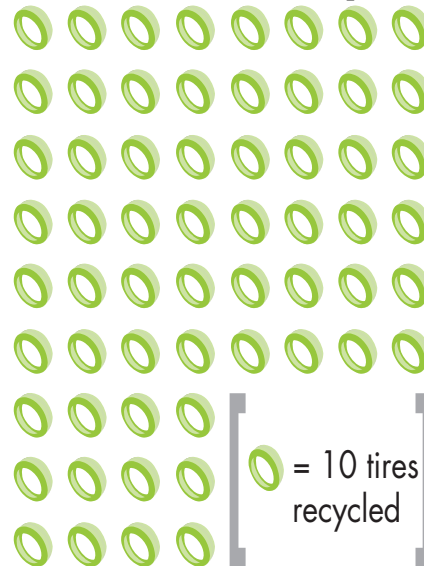
**13,000**  
public alleys

**1,900**  
miles of alleys

**35,000**  
acres of  
impermeable  
surface



### A Green Alley:

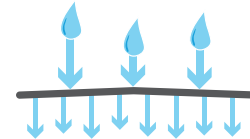


uses asphalt that recycles



**600**  
tires per alley

uses surfaces achieving



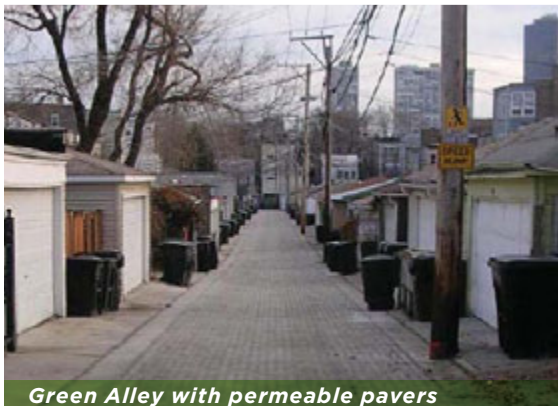
**80%**  
permeability

incorporates



**high  
albedo**  
pavements

to reduce the  
urban heat  
island effect



Green Alley with permeable pavers



### 3 Reduce stormwater run-off quantity while improving quality.

Management of stormwater run-off is becoming ever more important in many American cities. Too much rainwater can overwhelm antiquated sewer systems.

At a minimum, this leads to water pooling in the road, causing splashes by moving vehicles and premature erosion of the roadway. In worst case scenarios, contaminants can even enter our precious waterways.

While modernizing sewers and completing the regional Deep Tunnel project will help, we also need to find better ways to let rainwater disperse naturally, absorb into soil, water plants, or simply evaporate.





### 3 » ACTIONS

- Adopt sustainable infrastructure design guidelines – draft completed in 2012, final by 2013 – in tandem with Complete Street design standards.
- Complete 20 blocks of additional green alleys each year, and develop strategies to make them standard by 2020.
- Continue restrictions on the use of pre-emergent herbicides during tree planting operations to improve water quality and aquatic habitat.
- Evaluate the effectiveness of stormwater best practices incorporated into the Cermak/Blue Island Sustainable Streetscape, in partnership with the Metropolitan Water Reclamation District.



## CERMAK / BLUE ISLAND SUSTAINABLE STREETSCAPE

The Cermak/Blue Island sustainable streetscape project extends 1.5 miles from Halsted Street to Wolcott Avenue. The \$16.6 million-dollar project sets a high bar, not only for Chicago but for the nation, in achieving a street that is not only green in terms of landscaping and stormwater, but also extends to material and energy use, community integration, and monitoring and measurement. Some of the features and project goals are:

- **Stormwater** – Divert 80% of typical average annual rainfall from sewers using permeable pavement, bioswales, planters and street trees.
- **Water** – Eliminate the use of potable (drinkable) water for landscape irrigation, using native or drought tolerant plants.
- **Transportation** – Improve bus stop shelters, signage, and lighting; bike lanes; and install new, accessible sidewalks.
- **Energy** – Reduce energy use by 40% compared to traditional streetscapes using reflective surfaces and dark-sky friendly light fixtures.
- **Recycling** – Recycle at least 90% of construction waste; use recycled content for at least 10% of construction materials.
- **Heat** – Reduce ambient summer street temperatures on streets and sidewalks through the use of high albedo (more highly reflective) pavement, permeable pavements, roadway coatings, landscaping and trees.
- **Air quality** – Use low sulfur fuel for construction vehicles, limit idling, and use 40% of materials which were extracted, harvested, recovered or manufactured within 500 miles.
- **Education** – Develop self-guided tour and other outreach materials to highlight innovative sustainable features.
- **Monitoring** – Test to assure improvements meet predicted performance.



# 4

## Promote energy efficiency to reduce energy consumption.

CDOT owns and operates over a quarter of a million streetlights. While these lights are critical to vehicular and personal safety, they also consume tremendous amounts of energy. The attractive historically-styled “torch” streetlights throughout the Central Business District can waste over 60% of their energy illuminating skies and sides rather than the sidewalks and roadways where the light is needed. The more utilitarian and efficient “cobra-head” light fixture casts its light down, but still wastes upwards of 30% of its energy. At this rate, the typically used high-pressure sodium lamps (according to 2008 estimates)<sup>12</sup>

- Draw 73,710 kilowatts of power daily;
- Were responsible for 267,086 tons of CO<sub>2</sub> production (from electrical generation);
- Cost the City over \$14 million in electrical bills.

Fortunately, CDOT is not content with “typical.” The City is actively retrofitting signals and streetlights with vastly more energy-efficient lighting elements and fixtures. These improvements will save millions in energy costs, reduce unnecessary carbon emissions, and even reduce “light pollution” that impairs visibility of the night time sky.

Together, the sodium-to-halide conversions will combine to save 15.2 million kilowatt hours annually, prevent the annual emission of nearly 10,500 metric tons of CO<sub>2</sub>, and save taxpayers \$850,000 in electric bills.



Chicago by Day Satellite Photo - Source: NASA



Chicago by Night Satellite Photo - Source: NASA



## 4 » ACTIONS

- Retrofit 1,150 additional traffic signals with LED lighting by 2012, cutting energy consumption 90%.
- Replace 250-watt high pressure sodium lights on 362 blocks of residential streets and 11,000 alley fixtures with new "white light" 90- or 140-watt metal halide luminaires by the end of 2012.
- Replace 400-watt high pressure sodium lights on segments of Lake Shore Drive and Western Avenue with 315- or 210-watt metal halide luminaires.
- Upgrade the lighting around Union Station to be more energy-efficient and still attractive.
- Pilot test new technologies for energy efficiency such as LED street lights, wind and/or solar-powered street/alley lights, and street identifiers with wind turbines.



Converting from high-pressure sodium to halide fixtures:

**save**

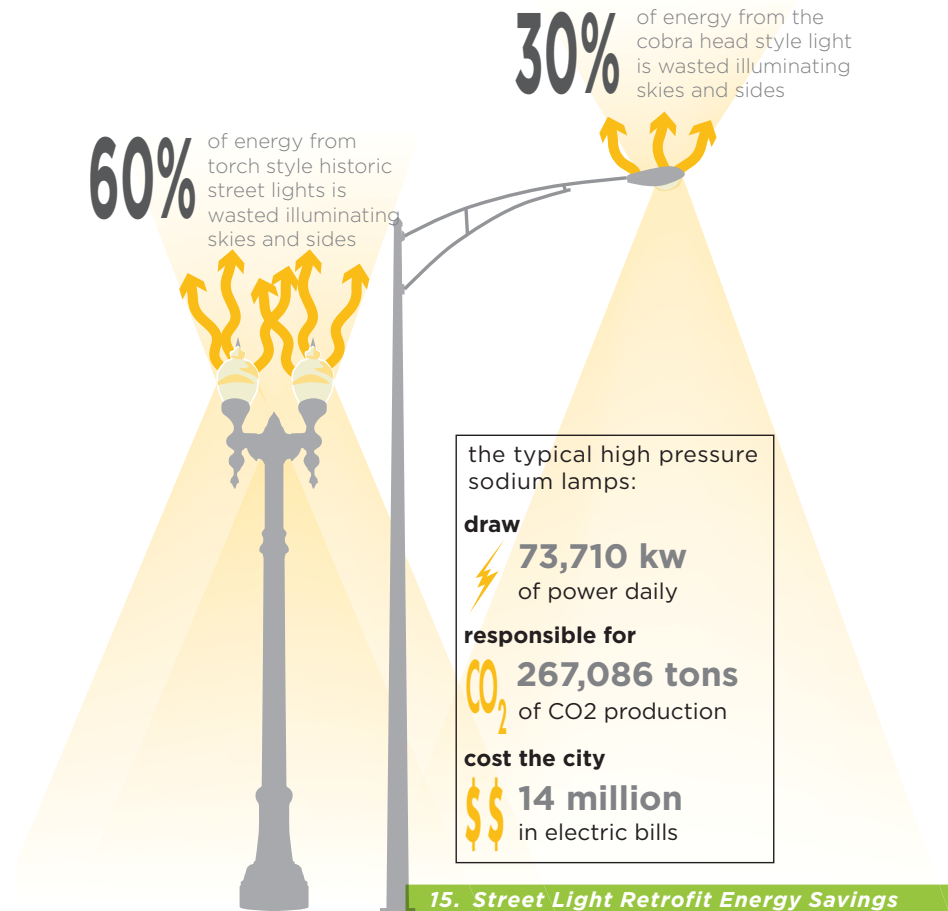
**15.2 million kw**  
of power annually

**reduce emissions by**

**10,500 metric tons**  
of CO<sub>2</sub>

**save taxpayers**

**\$850,000**  
in electric bills





## 5 **Reduce material waste and associated emissions by increasing the use of recycled materials and other environmentally preferable practices.**

CDOT repaves or reconstructs over 700 blocks of street each year. This represents tons of material that must be removed from our city. Where does all of this waste go? Traditionally these roadway wastes would be ground up and sent to a landfill. However, much of this “waste” can be diverted to still serve a useful purpose.

For example, in 2011, CDOT began using an asphalt mix for resurfacing that includes 5% reclaimed asphalt shingles in addition to 25% reclaimed asphalt pavement for a total recycled content of 30%. The shingles provide increased strength and stability for the pavement.

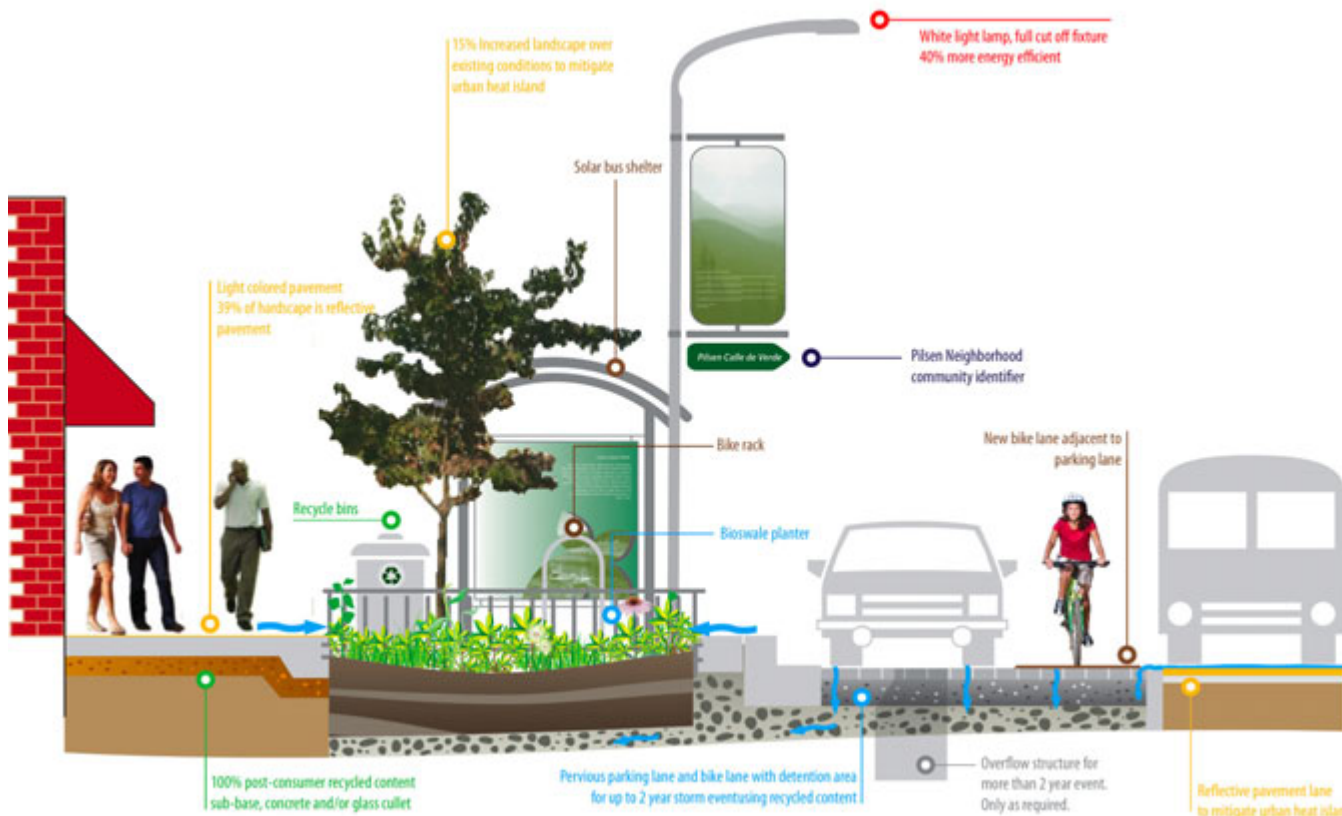
When it comes to waste, CDOT will follow the “three R’s” – reduce, reuse and recycle – by incorporating new policies and applications. This will be good for the environment, good for the city, and good for our bottom line.





## 5 » ACTIONS

- Divert at least 80% of construction waste to reuse.
- Divert 75% of asphalt from resurfacing to be reused as binder layer in future projects.
- Divert 75% of concrete from resurfacing to be reused as stone bed layer in future projects.
- Use at least 30% recycled-content concrete.
- Pilot and adopt methods that use less asphalt depth.



## SUSTAINABLE STREET STANDARDS

The Chicago Sustainable Streets Standards will outline sustainable design recommendations for the public right of way. Combined with the existing Streetscape Design Guidelines and new Complete Streets policies and guidelines, they will include environmental performance in the definition of a “complete street.” The new design standards will create environmental performance standards for roadway infrastructure in Chicago, and will provide strategies for implementation, construction details and specifications, and maintenance protocols. The standards will be scalable to the wide range of CDOT activities, and will be used to guide both private and public construction in the public right of way. The standards will integrate design strategies to address the following environmental goals within the public right of way:

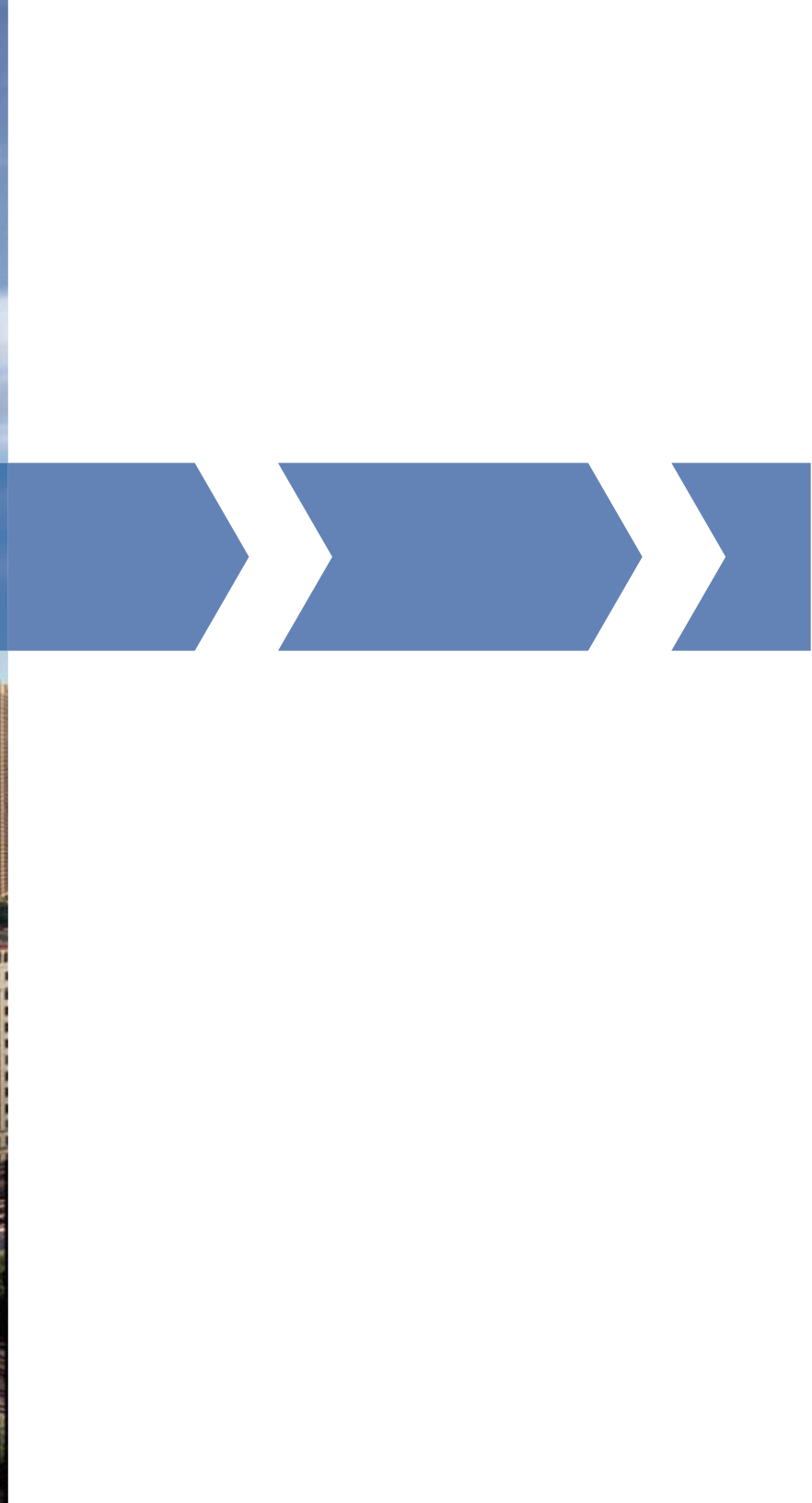
- Stormwater Management
- Water Efficiency
- Energy Efficiency
- Urban Heat Island Reduction
- Recycled Materials
- Construction Waste Recycling
- Local Materials
- Beauty and Community
- Commissioning





**Fuel our Economy**





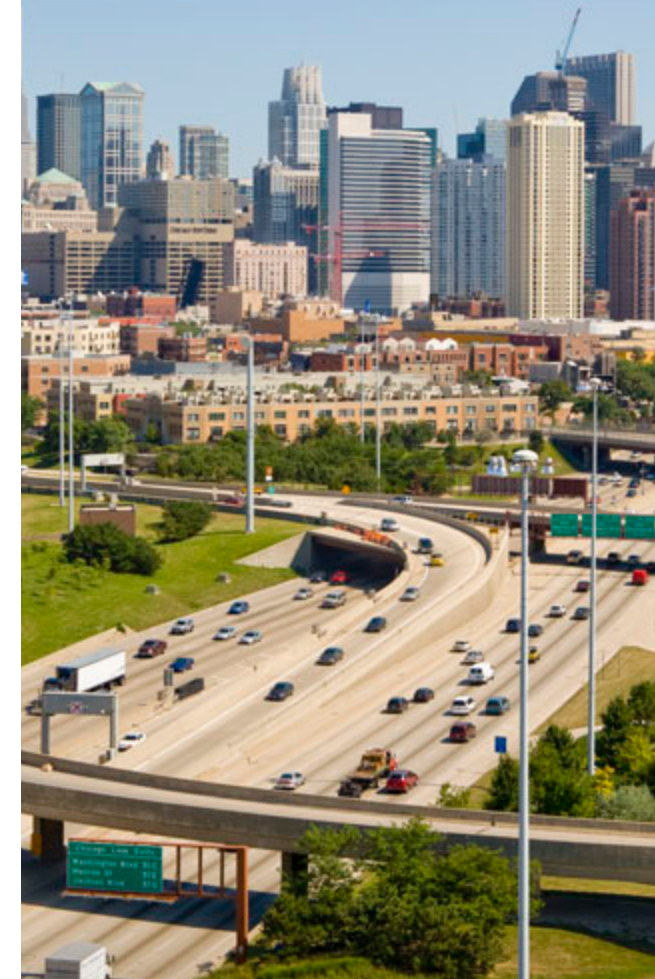


Chicago is among the world's top economic markets. Our diverse economy influences scores of industries, and changes in our market conditions echo across the global marketplace. Metropolitan Chicago is the world's fourth largest regional economy (by GDP), worth over half a trillion dollars, ranks as the world's fifth most powerful economic city (according to Forbes) and is also the world's fifth most important business center (according to MasterCard Financial).<sup>13</sup> In fields from aviation to pharmaceuticals, from management consulting to risk management, and from wind power to the power of the daily deal, local Chicago companies lead the world.

Our economic strength comes not only from the global industries and business interests that call Chicago home, but also from the keystone role our freight networks play in moving goods around the country. With our roots in rail, Chicago is currently the busiest rail hub in the United States and plays a critical role in moving the nation's goods.

Yet much of the city's economic energy comes from our local businesses and entrepreneurs who populate our main streets and boulevards. These are our homegrown economic heroes who have, and will continue to, create growth in the city and sustain today's dynamic and diverse metropolis. The small businesses of today are the potential economic powerhouses of tomorrow. They rely on our transportation investments – not only to provide efficient movement of people and goods, but also to create great public places for their employees and customers. Our streets and avenues are their address, their signature, and their identity. The quality of public places can greatly influence the ultimate success of these small businesses.

*Chicago is the 4<sup>th</sup>  
most important  
business center in  
the world*







## Performance Measures

1. Increase activity, sales revenue, and occupancy rates in neighborhood commercial districts.
2. Decrease hours of freight rail delay (as measured by the CREATE Program's simulation model).
3. Increase transit mode share for access trips to O'Hare and Midway Airports.
4. Increase Amtrak ridership on intercity passenger rail corridors serving Chicago.





## POLICIES + ACTIONS

# 1

## Make great streets and developments that enhance commerce and attract jobs.

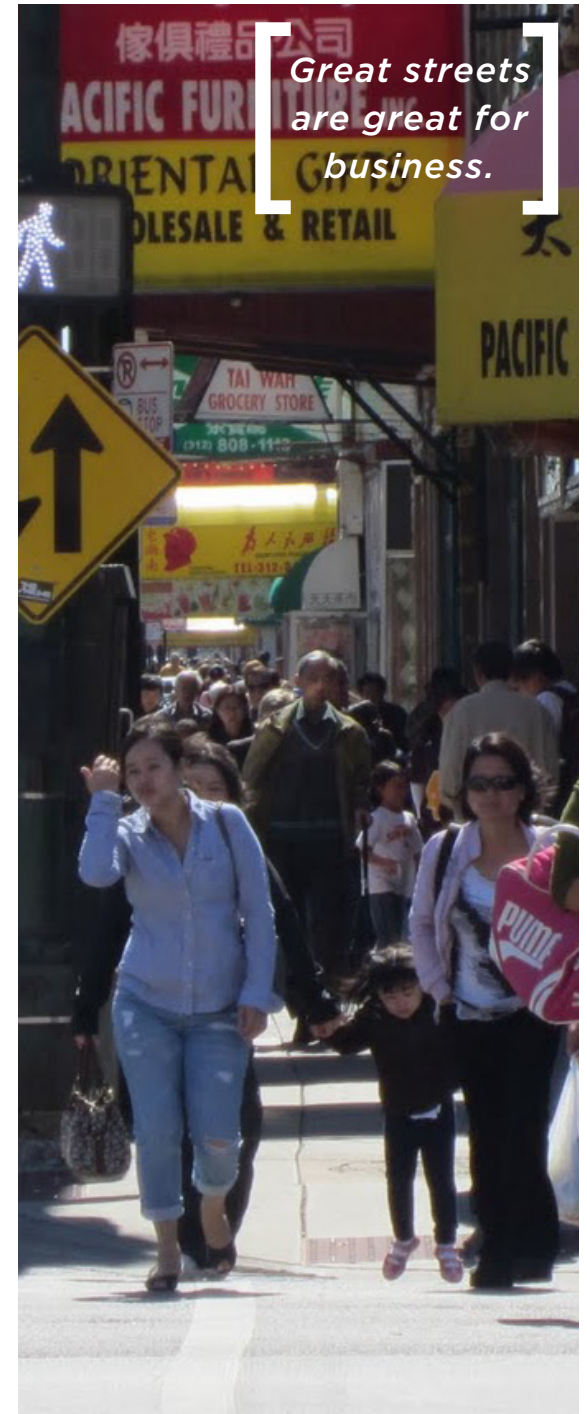
Great streets are great for business. Chicago's streets and boulevards are among the most iconic in the nation. The physical character of our streets has the capacity to either help or harm the businesses that line them. Parks, patios and plazas in the public right of way can improve street safety, increase access to open space, add additional seating, cultivate community and culture, and increase property values.

Streets are important real estate for commerce as well. They play host to sidewalk vending, outdoor cafes, and street festivals. They define the city's common identity and celebrate the unique diversity of our many neighborhoods. Careful and thoughtful design of our public right of way adds value to our city and our local business community.

Just as careful design of our streets is important, careful review of the new development projects that could redefine these streets is equally important. Well planned, designed and managed private developments add to, rather than detract from, the common public space, support a more active and walkable street environment and use a variety of modes to support their residents, workers and patrons rather than overloading any one.

CDOT wants commercial streets that are as dynamic and lively as our city itself. Chicago has been a national leader in making our streets unique celebrations of the local community – work we look forward to continuing.

*Great streets  
are great for  
business.*





## 1 » ACTIONS

- a. Finish primary construction tasks on a new US Highway 41 through the old USX Steel Mill site, between 79th and 92nd streets. New roadway, utilities, lighting, sidewalks, landscaping, signals, parkways and more will facilitate development of a site ready for new retailers and residences.
- b. Complete the design of the 71st Street Streetscape (South Shore Drive to Jeffrey Boulevard) to organize street use for safety, expanded mobility, and support for local businesses.
- c. Finish the Cermak Road Sustainable Streetscape Project.
- d. Finish final engineering design of the Lawrence Avenue Streetscape (Western Avenue to Clark Street), widening sidewalks, adding trees, calming traffic, improving safety, enhancing travel options and managing stormwater.
- e. Design and begin reconstruction by 2014 on the next segments of three major commercial streets: Milwaukee Avenue (Kilpatrick to Belmont); Grand Avenue (Pulaski to Damen) and Lake Street (Damen to the Kennedy Expressway).
- f. Develop a permit process for “pop-up” uses of public way and support efforts of the Chicago Loop Alliance to pilot “pop-up cafes” downtown.
- g. Investigate the feasibility of new plazas and patios in underutilized portions of the public right of way and implement pilot site locations by 2013.
- h. Challenge business associations and other partners to install at least 10 additional on-street bike parking corrals by 2013 toward a target of 25 by 2014.
- i. Develop standards for traffic impact analyses and adopt into zoning guidelines for Planning Commission submission.
- j. Develop guidelines for Transportation Demand Management plans to inform development planning and ensure traffic impacts are mitigated.



## MAKE WAY FOR PEOPLE

Make Way for People is a CDOT pilot program aimed at improving neighborhood livability by encouraging pedestrian activity, increasing access to open space, and improving street safety.

Three elements of the program are:

- **People Spots** – Build “parklets” and pop-up cafes on platforms in the parking lane to reposition seating space on streets with narrow sidewalks or high pedestrian volumes.
- **People Streets** - Convert underused asphalt areas into hardscape parks to create safer intersections and more public open space where it is most needed.
- **People Plazas** – Activate existing CDOT malls, plazas, and intersection triangles to programming new community and retail activities.



## 2

### **Improve freight rail operations and facilities in the Chicago hub to improve mobility, reliability, and competitiveness.**

Chicago grew up around rail; it is both our history and our future. Our rail infrastructure is critical not only to the region but to the nation's commerce. Over 500 freight trains pass through the Chicago region daily, carrying 25% of the nation's freight. Trains in this crowded hub contend with lines that cross one another, bridges that must open for canal ships, conflicts with major auto corridors, and schedules for shared use of rail lines by Metra, Amtrak, and freight railroads.

To maintain Chicago's competitive advantage in rail freight, we must invest to modernize our rail infrastructure. The Chicago Region Environmental and Transportation Efficiency (CREATE) program is a first-of-its-kind partnership between the city of Chicago, state of Illinois, and all of the railroads in the region. It has identified 70 critical projects to decongest the region's rail system and add capacity for future economic growth. CDOT, as a central partner, will continue to advance implementation of CREATE projects within our jurisdiction.



## **2 » ACTIONS**

- a. Complete primary work on the 130th/Torrence grade separation by 2013.
- b. Finish the citywide viaduct improvements funded by the federal TIGER Program grant in 2012.
- c. Coordinate efforts with Metra as the Englewood Flyover project begins construction for completion in 2014.
- d. Start planning and design for CREATE program grade separation projects at Archer/Kenton and Columbus/Maplewood.
- e. Identify additional available funding sources and work with CREATE partners to apply for grants, as appropriate.
- f. Work with CREATE partners to initiate, continue and complete construction as more funds for projects are secured.
- g. Work with partners to implement a legislative strategy for CREATE during the upcoming federal transportation legislation reauthorization process.
- h. Continually update public outreach materials including: presentations, photo libraries, fact sheets, and the computer animation of key train movements.
- i. Refine the economic analysis benefits of CREATE projects and national logistics cost savings.
- j. Evaluate the feasibility of alternative freight rail routings on the far south side to address community impacts of existing at-grade crossings and future transit needs.





*Over 1,200  
trains pass  
through  
Chicagoland  
each day.*

**Signals at Corwith Intermodal were replaced by the CREATE program, improving Metra and Amtrak reliability.**



## CREATE

Freight rail moves the economy – quite literally – and the Chicago region has long been a hub of rail activity. Each day, approximately 500 freight trains pass through the region handling one-fourth of the nation's freight rail traffic. The growth of both passenger and freight rail, and the intermingling of both together with motorways, has increased congestion and delay for all modes to the point that it threatens the goods economy.

The rail lines built more than a century ago were not configured for the volumes and types of freight being carried currently, and Chicago has become the largest U.S. rail freight chokepoint. Over the next 30 years, demand for freight rail service in Chicago is expected to nearly double, assuming we can meet that demand.

Thus arose CREATE – the Chicago Region Environmental and Transportation Efficiency Program – a first-of-its-kind partnership founded in 2003 between the U.S. DOT, the state of Illinois, city of Chicago, Metra, Amtrak, and the nation's freight railroads. A project of national significance, CREATE will invest billions in critically needed improvements to increase the efficiency of the regional (and national) passenger and freight rail infrastructure and enhance the quality of life for Chicago-area residents.

The work includes:

- Common Operational Picture, which is the integration of information from dispatch systems of all major railroads in the region into a single display
- 25 new roadway overpasses or underpasses to separate traffic from trains
- 6 new rail overpasses or underpasses to separate passenger trains from freight lines
- 37 freight rail projects, including extensive upgrades of tracks, switches and signal systems
- Viaduct improvement projects
- Grade crossing safety enhancements

When it is completed, the benefits of CREATE will include:

- \$3.6 billion annual economic benefit from greater efficiency of freight rail
- 1,460 fewer tons of nitrogen oxides (NOx) annually (equivalent of 7 NOx-free summer days).
- 438 fewer tons of carbon monoxide (CO) annually
- 7 to 18 million fewer gallons of diesel fuel used
- 3,000 hours saved by motorists each day
- 17,000 jobs sustained through 2020 in northeast Illinois
- 15 lives saved and countless injuries avoided due to the 25 grade separations



### 3 **Improve services and operations for truck mobility for the efficient movement of goods and economic competitiveness of the central city.**

Trucks are critical to economic development, business operations and service delivery. Nearly every business sector relies on truck deliveries in some form or fashion. Trucks play a role in nearly every trip chain, whether it is bringing flowers from Ecuador to the local florist, documents from Indonesia to Boeing headquarters, or tortillas from Pilsen and Little Village factories to taquerias and groceries.<sup>14</sup>

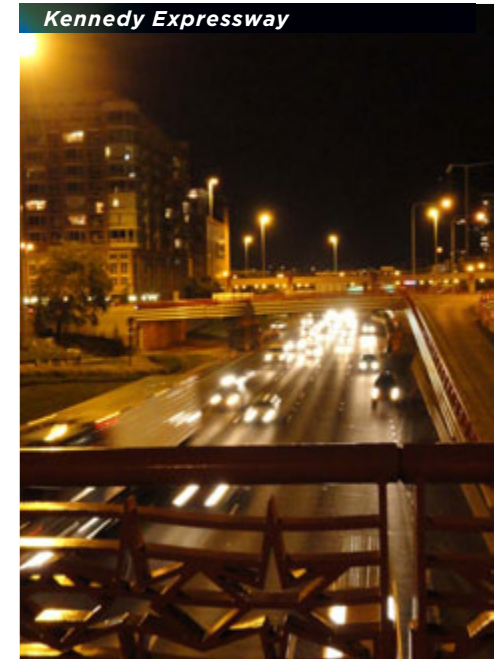
These trucks literally drive our economy and it is vital that they be accommodated, properly managed, and effectively served. This will mean making it easier for trucks to find the best time and place to load and unload their goods, as well as providing better information to allow drivers to get to their destinations as efficiently as possible.





### 3 » ACTIONS

- a. Evaluate curbside loading zones to encourage commercial use only, simple enforcement, and increased turnover and availability.
- b. Explore intelligent transportation systems to provide better information to the trucking industry regarding congestion conditions and availability of public loading areas.
- c. Identify and implement additional loading zones in "hot spot" areas.
- d. Complete a truck route planning study and develop truck route system maps, website and GIS layer for a travel advisory system to assist commercial vehicle operators in planning trips and anticipating detours.





# 4

## Be a leader – and a partner – in the region.

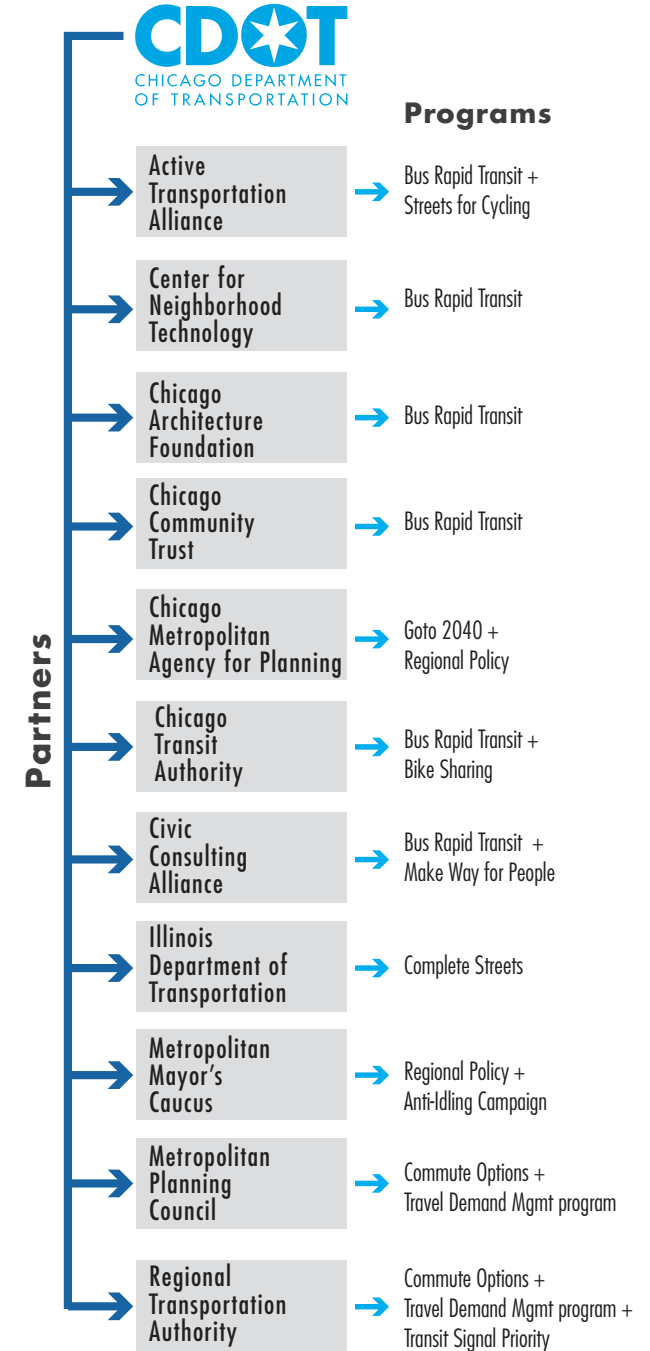
A strong region makes for strong cities. This is especially true in large, complex urban areas where the actions of any individual municipality or agency can have implications throughout the region. This is why Chicago supports and actively seeks intergovernmental agreements and cooperation from a vast array of agencies, municipalities and other governmental entities in our unrelenting quest to improve the quality of life for our residents and visitors.

Our relationship with our suburban neighbors is multifaceted; occasionally competitors, but often collaborators. Many agencies, both public and private, as well as the for-profit and not-for-profit organizations play important and often unique roles in the continued development of our city and region. Each brings a certain expertise and agenda to the table. We welcome and seek input, advice and information from all concerned and will continue to work to improve our standing as a regional leader to represent the needs and desires of the citizens of Chicago.



The Sauganash Trail and Lincolnwood's new Skokie Valley Trail will meet at Devon to serve both communities.

### 17. Civic / Agency Partnerships





## 4 » ACTIONS

- a. Continue to work with the Chicago Metropolitan Agency for Planning (CMAP) and other agencies on the implementation of the regional comprehensive plan, GOTO 2040. Several major capital projects and other initiatives support the goals and objectives of the City and of GOTO2040; these include the West Loop Transportation Center, Union Station Master Plan, and the CTA Red Line Extension.
- b. Work with the Regional Transportation Authority (RTA), the Metropolitan Planning Council (MPC) and others to develop and implement the Commute Options program, and coordinate with the City's new Travel Demand Management program.
- c. Continue Bus Rapid Transit planning efforts in cooperation with CTA and civic partners such as the Metropolitan Planning Council (MPC), Chicago Community Trust (CCT), Chicago Architecture Foundation (CAF), Active Transportation Alliance (ActiveTrans), Civic Consulting Alliance (CCA), and the Center for Neighborhood Technology (CNT).
- d. Continue to coordinate with adjacent suburbs on trail developments that cross municipal boundaries, such the Sauganash/Skokie Valley Trail and Weber Spur Trail corridors with the Village of Lincolnwood and the Cal-Sag Trail with several southern suburbs.
- e. Work with CMAP, the Metropolitan Mayors Caucus, and other interested parties on regional policy initiatives related to the allocation and sharing of Federal and State transportation funding.
- f. Work with IDOT and other partners to develop design standards specific to highly urbanized areas in order to minimize design variance requests that delay roadway improvements and add unnecessary costs.
- g. Assist the Metropolitan Mayor's Caucus in starting a Federally-funded anti-idling campaign at city and suburban schools.



Devon Avenue Shopping



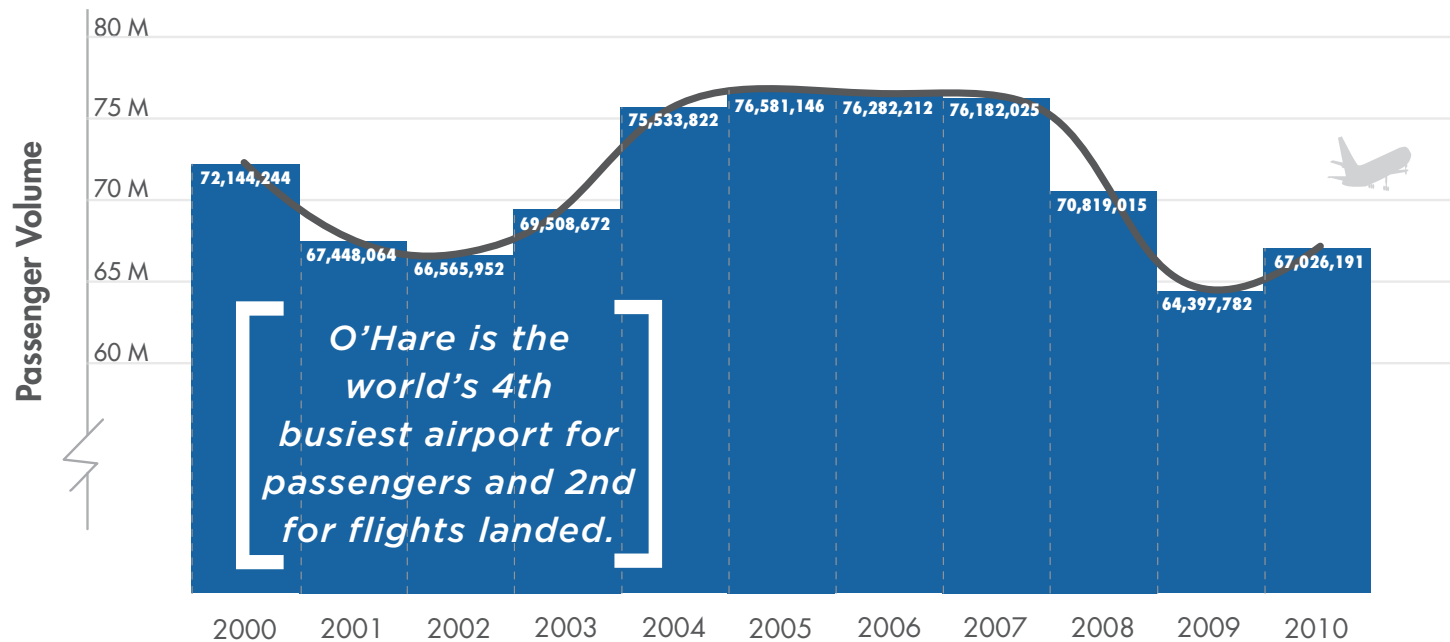
## 5 Improve Chicago's and Chicagoans' connections to the nation and the world via air and rail.

Safe, efficient, and reliable travel between Chicago and other national and global destinations is absolutely critical to the city's economy and vitality. O'Hare and Midway airports are among the busiest passenger airports in the nation and connect Chicago to hundreds of cities around the globe.

Chicago is also a major passenger rail hub with more than three million intercity and long distance passenger rail travelers using Amtrak trains at Chicago's Union Station each year. As the hub of the planned Midwest high speed passenger rail network, Chicago will connect the Great Lakes region and benefit from the competitive advantages that brings.

### 5 » ACTIONS

- Coordinate with IDOT to determine preferred routes for higher speed passenger rail within the City.
- Identify strategic and feasible opportunities for integrating O'Hare Airport into the Midwest passenger rail network.
- Explore the feasibility of further improvements to transit connections between Downtown and O'Hare and Midway Airports.
- Support University of Illinois researchers at work on the State of Illinois Feasibility Study for Very High Speed Rail to ensure timely completion of their reports.



18. Daily Passenger Average at O'Hare International Airport





\*Indiana DOT is evaluating additional passenger rail service to South Bend and to Louisville.  
 \*\*In Missouri, current restrictions limit train speeds to 79 mph.

### 19. Midwest Regional Initiative - Proposed HSR Network

Flags of Chicago's worldwide Sister Cities, O'Hare Airport





# ONWARD

## concluding remarks

In the preceding pages, CDOT has presented our vision for the future and an agenda for the actions we will take over the next 24 months to move **Chicago Forward**.

Our goals are to make Chicago safer, well maintained, full of options, well served, greener, and economically stronger- Now it is time to get to work.

Follow our projects and progress at these locations:

- [www.chicagodot.org](http://www.chicagodot.org)
- [www.facebook.com/CDOTNews](https://www.facebook.com/CDOTNews)
- [twitter.com/ChicagoDOT](https://twitter.com/ChicagoDOT) or follow @ChicagoDOT if you are a member.









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## PHOTO CREDITS

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- » Original front and back cover images, pages 4, 28 (bottom), 29 (left), 34 (right), 35 (right), 48 (left, top, middle), 49 (all), 55, 60 (left), 62

Chicago History Museum, Library of Congress - Chicago Daily news historical

- » Pages 8–9 (images incorporated into the Timeline - 1800 and 1920)

CREATE

- » Pages 84, 85

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- » Pages 2, 6, 8–9 (timeline images), 17 (left), 20 (left), 22 (left), 30 (right), 34 (left), 35 (top left), 37 (all), 40 (middle, bottom), 42, 48 (bottom), 50, 58 (right), 61 (top left, bottom), 69 (top), 72 (bottom), 74, 81, 86, 87 (top left, top right, bottom left), 88, 89 (bottom)

NASA

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2. Page 12 - <http://www.businessinsider.com/gdp-by-city-2011-3#3-chicago-ill-23>
3. Page 12 - <http://www.skyscrapercity.com/showthread.php?t=1247573>
4. Page 12 - [http://www.bls.gov/eag/eag.il\\_chicago\\_msa.htm](http://www.bls.gov/eag/eag.il_chicago_msa.htm)
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7. Page 43 - <http://www.clocc.net/coc/prevalence.html>
8. Page 43 - Illinois Cardio Vascular Task Force, June 2000
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  - » [http://www.forbes.com/2008/07/15/economic-growth-gdp-biz-cx\\_jz\\_0715powercities.html](http://www.forbes.com/2008/07/15/economic-growth-gdp-biz-cx_jz_0715powercities.html)
  - » <http://goo.gl/w03Ma>
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14. Page 86 - <http://www.wbez.org/story/news/economy/blizzard-spurs-temporary-tortilla-shortage>



## POLICY SUMMARY

### SAFETY FIRST

1. Evaluation: Gather and use data to assess the root causes of transportation safety hazards and address them in a systematic and sustainable way.
2. Engineering: Develop standards and complete designs to ensure the safety of all users, including pedestrians, cyclists, motorists, children, seniors, and people with disabilities.
3. Enforcement: Partner with sister agencies to refocus enforcement efforts to protect the safety of all users, particularly the most vulnerable.
4. Education: Promote awareness to all residents and travelers on safe habits to decrease transportation risks and increase safe, efficient, and enjoyable travel in the city.

### REBUILD & RENEW

1. Make it last with maintenance.
2. Fix it first and build it better.
3. Inspect and coordinate.
4. Seek equitable and reliable resources for these efforts.

### CHOICES FOR CHICAGO

1. More fully and consistently implement Chicago's Complete Streets Policy.
2. Make Chicago the best big city in America for cycling and walking.
3. Provide all residents, workers, and visitors with efficient, affordable, and attractive transit services.
4. Improve intermodal connections and operations.
5. Ensure predictable, safe, and reliable motor vehicle operations.

### SERVING CHICAGOANS

1. Improve responsiveness.
2. Enhance transparency and public communications.
3. Disseminate customer information.
4. Build agency and staff capacities and increase efficiencies.

### A MORE SUSTAINABLE CITY

1. Support the Chicago Climate Action Plan.
2. Enhance CDOT's GreenStreets Program.
3. Reduce stormwater run-off quantity while improving quality.
4. Promote energy efficiency to reduce energy consumption.
5. Reduce material waste and associated emissions by increasing the use of recycled materials and other environmentally preferable practices.

### FUEL OUR ECONOMY

1. Make great streets and developments that enhance commerce and attract jobs.
2. Improve freight rail operations and facilities in the Chicago hub to improve mobility, reliability, and competitiveness.
3. Improve services and operations for truck mobility for the efficient movement of goods and economic competitiveness of the central city.
4. Be a leader – and a partner – in the region.
5. Improve Chicago's and Chicagoans' connections to the nation and the world via air and rail.



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CHICAGO DEPARTMENT  
OF TRANSPORTATION

BUILDING A NEW  
**CHICAGO**  
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